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ABSTRACT

This report contains critiques of American professional societies by the Study Commission on Undergraduate Education and the Education of Teachers. The critiques examine the following five areas: (1) effects of professional societies on curriculum, preparation of teachers, and programs in public schools; (2) effects of professional societies on educational reform in higher education, on departmental divisions, and on curriculum of higher education; (3) the professional society's own informal curriculum and socialization process; (4) accreditation activities of professional societies; and (5) lobbying activities of professional societies and their effect on undergraduate education. The commission evaluated data received from professional societies and believes that by and large professional societies tend to be more concerned with their own status and the status of their disciplines than in disseminating knowledge of their disciplines or in improving young people's education in their disciplines. The critiques are divided into sections on scientific societies, social science professional societies, and humanities. Supplementary essays on broad themes are included along with the critiques evaluating specific professional societies. The report makes recommendations for making professional societies more responsive to the needs of the society and the public whose tax money helps support them. (CD)

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A TIME HALF DEAD AT THE TOP:

The Professional Societies
and the Reform of Schooling in America–1955-1975

> *". . . . Blessed still this tower*
> *. . . . Sing it rhyme upon rhyme*
> *In mockery of a time*
> *Half dead at the top. . . .*
> *Swift beating on his breast in sibylline frenzy blind*
> *Because the heart in his blood sodden breast*
> *had dragged him down into mankind."*
> Yeats, *Blood and The Moon*

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Diane Savage, researcher

Study Commission on Undergraduate Education
and the Education of Teachers
Lincoln, Nebraska
(Paul A. Olson, Director)

1975

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INTRODUCTION

THE PROFESSIONAL SOCIETIES AND THE REFORM OF EDUCATION IN SCHOOLS AND COLLEGES

How This Study Came to Be

The "Professional Society" committee of the Study Commission on Undergraduate Education and the Education of Teachers was set up in 1971 under the chairmanship of Eli M. Bower. The committee's charge was to look into the history and uses of the professional societies by the Office of Education, particularly with regard to what ought to be done next in the development of a new federal relationship. The almost fifteen-year period of curriculum reform, beginning with the passage of the 1958 National Defense Education Act, in which professional societies had assisted the federal government and been subsidized by it, to push reform in the schools had spent its momentum. The archetypal cycles which included funding professional societies (or persons closely allied with professional societies) to develop curricula, followed by in-service institutes for practicing teachers to introduce them to the new curricula and get them to teach them in their schools, followed by revision of the curricula, widescale introduction of them through commercial texts and efforts to affect pre-service licensing practices–these cycles had nearly run their course in virtually every discipline taught in the schools.

Other topics had come to concern the Office of Education and the American public. Reformers in the schools came to be aware, in the late 60's, as they should have been from the beginning, that the schools have audiences: that they exist in communities; and that what they say is communicated through language. Even the densest of the reformers (I was among them) eventually recognized that there had to be much more concentration on the communication of the culture of the child's community, on his language and his thought. Communicating the intellectual paradigms studied in advanced graduate school circles, however definitive the activity might seem to be, could not be the be-all and end-all of school. Thus, the present concern for bilingual, bicultural education, for community education, for community control of the schools, and for without-walls kind of education *of all sorts. Reformers have also recently become clear that the schools which straddle two cultures have to come to some kind of understanding of the ethno-science, the ethno-botany, the political science, the economic system, and the expressive conventions of non-western cultures, particularly when schools are set amid such cultures and endeavor to teach to them.*

At the beginning of the professional society committee's discussion, there were some questions as to whether the professional societies in the disciplines could contribute to any new reform effort which respected the audiences of education. There were further questions as to whether the professional societies were, in fact, professional; whether they did command a discipline; and what their claim to authority was. There was a historical question of the extent to which the curriculum reform movement of the last fifteen years had served all the good purposes for which it was supported by the people and Congress (whether, in fact, schools had become simultaneously livelier, more intellectual, more interesting and humane places in which to learn "the truth," or whether what had happened was that the American common schools had been recast, as the British claimed at the Dartmouth conference on the teaching of English, in the mold of the drabbest part of American education, the American graduate school). Because the question of authority was raised, the discussion asked whether the authority of the professional societies was, in fact, magisterial and intellectual or whether it was political, as in a monopoly, trade union or guild.

First and Second Meetings and Later Research

The reports of the first meeting and second meetings of the professional society committee are interesting reports in retrospect.[1] *The committee proposed to itself the following hypotheses and tasks at its first meeting.*

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[1] The meetings were held in December, 1971, and February, 1972, and were attended by Eli Bower, University of California, Berkeley (Chairman); Al Hollingsworth, English, Michigan State; Richard Jones, Psychology, Evergreen State; Henry Winkler, History, Rutgers University; Leo Shapiro, Statistics, Leo Shapiro and Associates. Later the committee was joined for various sessions by Robert Hogan, National Council of Teachers of English; Marion Langer, American Ortho-Psychiatric Association; Diane Lewis, Anthropology, Oakes College, University of California at Santa Cruz.

At the start of the [first] meeting, professional societies were defined as discipline-oriented associations. One of the committee members suggested a functional definition for professional societies: "Given the mobility of the academic community, professional societies provide a cultural construct—an identity for members." Professional societies are hypothesized to exert influence by:

> *(a) Defining the division of knowledge into separate disciplines and preserving that division of knowledge by the qualifications set for membership. . . .*
>
> *(b) Directing the efforts of the membership toward the development of knowledge commanded by the discipline through a system of rewards that places major value on research and publication, and not on the development of elementary and secondary teachers and curricula or participation in elementary or secondary education. . . .*
>
> *(c) Influencing the allocation of societal resources by giving "expert" testimony to legislative hearings, to foundations, and to other groups that have money or power and are seeking to improve the education of children. . . .*

The committee felt they should identify societies that are particularly relevant to secondary and elementary education and to the training of teachers and examine these societies historically—on a case-by-case basis—to see how they developed and how they have changed through time. The study should examine financial structure, including the sources and uses of funds. Such case studies, in addition to casting light on the dynamic process of a society's life over time, could yield information pertinent to the general concern of the committee with developing an understanding of how and why professional societies exert the influence that they are found to exert. The committee was also interested in identifying societies that have innovative programs relevant to elementary and secondary education and the training of teachers and finding out how and why these innovations occurred.

At the second meeting, the following questions were posed as examinable from a policy perspective:

> Are the professional societies: Organized for research, not teaching? Given to a professed interest in teaching but not implemented? Acting to extend questionable divisions of disciplines of disciplines from graduate to lower schools? Limiting their work to curriculum writing? Perpetuating artificial divisions? Continuing as political divisions? Serving the professional elite? Using power to influence the decisions of others? Full of potential for change? Capable of mobilizing potential for change?[2]

Once the questions had been raised the committee had to decide on a method for answering them. The method which I would have supported was a method which employed indirect research as to how the professional societies functioned in Washington and in relationship to their members. However, the committee chose the more direct, open method of going directly to the societies and asking them a series of questions which were intended to provide clues to answers. The questioning procedures were prepared by Eli Bower. As some of the questions were fairly objective, Mr. Bower secured the assistance of a researcher, Diane Savage, who went to each of the professional societies and gathered straightforward answers in such areas as funding, membership, structure, governance, main committees and thrusts. Bower's committee was also seeking answers to questions which required interpretative responses which were not immediately forthcoming from the published records of the societies, from the standard literature about them, or from standard reports–which society executive secretaries could make available to the Commission. Hence, Bower arranged a sequence of visits to each of the societies' headquarters so that the committees could get some sense of what kind of place the society lived in, what its operations were on Capitol Hill, what the values of the executive secretary and his staff were and those of the "Executive Committee" with which he worked. In essence, the committee wanted to see what the classrooms looked like where some of the central intellectual decisions about the future of higher education–and indirectly of the schools–were made: what the furniture was like, how rewards were

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[2] Minutes of Study Commission "Professional Society" Committee meetings, Leo Shapiro and Associates.

handed out, what the political-social messages and the educational messages were.[3]

Subsequently Ms. Savage and Mr. Bower brought in reports on two sets of research which they had done and submitted them to the Study Commission. These will be available in xerox from the Commission for a time as they are the raw data from which this report is written. It had been the Study Commission's hope that the two sets of data would suggest a rather easy synthesis. However, that was not the case. Bower, having completed the first stage of the study, moved from Washington to the University of California, Berkeley, to become Director of the Health and Medical Sciences Program of the Graduate Division. The task of synthesis fell to the Study Commission directorate. In doing the synthesis, we wrote to each of the minor societies in the United States asking them what it was doing with respect to the education of teachers, asking by letter much the same questions which the Bower committee had, in person, asked of the major socie[illegible] together a preliminary picture of what the societies had been [illegible]'s of our earlier research and sent that to them, asking them for [illegible] and revisions. To round out our study, we examined accreditation and licensing law and other legal areas of interest to professional society operations and reform so as to discover principles which would tell us what we ought to be looking for if citizens were to act on our report.

Rosemary Bergstrom, a writer for the Study Commission staff, was asked to synthesize various materials which had been brought in and to prepare a book from the materials. Part of her task was not only to synthesize the stuff which had been brought in, but to find additional case studies bearing on the day-to-day detail of professional society activities so that the Study Commission, in preparing its final document, would have extended case histories by actual participants in the professional society process to which our audience could relate. These "case histories" were to constitute, as it were, examplars upon which the Study Commission could base its recommendations.

The total work of synthesis was done by Ms. Bergstrom in consultation

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[3] The committee which made the visits to the professional societies included members of the committee, its staff, and a few other persons appointed by it.

with the SCUEET staff; Ms. Bergstrom also assisted me in developing the notions that lie behind this introduction.

Limitations of the Book's Data

The data which was gathered for this book was gathered primarily in 1971-72 and may not reflect completely accurately the realities of 1974 and 1975. However, Harland and Sue Bloland in their recent book parallel to this—on professional societies and the effects of the caucus revolts—suggest that the watershed for the societies was 1970.[4] Then the surplus of Ph.D.'s on the job market became especially apparent. The pressure to find new "doctors" to teach the hordes of students entering America's colleges and universities in the 60's diminished considerably. Simultaneously, American professors were no longer under direct pressure to make grading decisions which impinged on the draft and the war. They no longer had to decide whether to support America's direct participation in the war in Indochina, whether to support war-related research on the campuses, whether to place commitment to justice first or commitment to disengaged research. Or so it seemed. The cumulative effect of the crises of the late 60's was to create a series of strikes for power by the politically engaged professional society member and to require some fairly serious adjustments in the governance of the professional societies. New subjects were allowed for discussion at their meetings; a re-evaluation of their relationships with the federal government was made. The caucus revolts also urged a reform in teaching in the colleges and in the schools of America, reform which did not come about because neither radicals nor conservatives seemed to care that much about what went on in undergraduate education or in the common schools.

On the other hand, the effect of the crisis of the early 70's, a crisis which derived from the no-growth situation, was to force the professional societies to look much more carefully at their funding and membership and to try to balance the budget. The effect of the enrollment crisis on the radical caucuses, in the same period, was to turn them to unionization of campus teachers to protect jobs. Neither the federal program situation nor the professional society situation seems to have changed much since a couple of years ago when the information in the present book was gathered.

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[4] Harland G. and Sue M. Bloland, *American Learned Societies in Transition* (New York: Carnegie Commission, 1974), pp. 5-41 and 101-14.

Differing Views of Professional Society Functions and Functions of Federal Interventions

What did all our scrutinizing of the professional societies discover as to what the professional societies are up to and what the federal government ought to do? One member of one of the Study Commission's "Academic Disciplines" committee, economist Kenneth Boulding, has written that the professional societies, particularly the social science professional societies, ought to be heavily subsidized by the federal government's research agencies. Boulding's argument is as follows:

> Another very critical organizational problem is how to promote communication, that is, the development of disciplines, among scientists. Here the professional societies play an extremely important role. I have argued indeed that grants to professional societies are apt to be fantastically productive, for they not only usually stimulate a great deal of unpaid labor, but they also give resources to those people who know best where the action is. A professional society would no doubt get corrupted if it were too rich, but the use of professional societies as granting agencies or wholesalers is something to which careful attention should be given. The development of "disciplines" is very important here. I have defined a discipline as a social subsystem within which a young man can get promoted for pointing out that an old man has made an ass of himself. A discipline sets up a reward structure dominated by peers, it must be confessed—which acts as a kind of sieve for error.
>
> It is one of the great dangers of interdisciplinary operations, and especially broad, general, public-platform, best-seller kinds of operations that they are apt to fall into the undisciplined and are not subject to the checks which smaller and more technical, scientific subcultures possess. These "invisible" colleges, as de Solla Price has called them, are of enormous importance in the

> advance of science. Yet somehow the granting agencies never seem to have devised any apparatus for dealing with them or supporting them. One of the great problems here is that there is inadequate coordination of specialists. There needs to be, as it were, an invisible college of invisible colleges. The Society for General Systems Research is, of course, an attempt at this, but the general systems movement has still not really established itself in the academic community.[5]

Boulding's argument has, for sometime, been that the professional societies are relatively disinterested, invisible colleges, sprawling across the country; that federal funding of them as research centers might be more effective than the federal funding of the graduate research institutions and think-tanks which we have now.

It may not be a fair test of Boulding's argument to look at federal policy with respect to schools in the last fifteen years. The schools are not research labs or think-tanks. Federal policy toward them in the school reform matter was not at all consistent. Yet, at some primitive levels, schools are centers of inquiry and one could argue that what Boulding is urging—that is, a massive federal funding of the professional societies—took place in school areas from the late 50's on through the authority of the National Defense Education Act, the Cooperative Research program, the Bureau of Education Personnel Development, the National Endowment for the Humanities and the National Science Foundation. It seems safe to say that the harvest posited by the Boulding statement was not gathered in by the schools, partly perhaps because the efforts were too timid and short lived, partly because they were too nationalized and centralized, and partly because the very nature of professional societies makes them poor tools of education reform (indeed, as Toulmin and others have pointed out, they are often rather poor vehicles for critiquing change in the 'disciplinary method' or 'paradigm' because of the domination of old guards or opinionated older leaders).

The federal use of the professional societies takes place against a background. It is possible to look at the interventions of the Office of Education and other federal agencies in school policies as coming in four waves: (1) early interventions having to do with supporting American expansion across the frontier through the land-grant college (Morrill Act, 1862); (2) parallel interventions having to do with the promotion of efficient institutional operations (NCES, 1867); (3) the 50's-60's wave of interest relating federal intervention in education to defense; and, (4) the 60's reform related to civil rights. The defense-related movement began with the National Defense Education Act of 1958 and the work in foreign languages, mathematics and science, actions which together authorized federal intervention in curriculum construction and retraining teachers. The hard sciences, physics, chemistry, and mathematics, had clear war uses. Foreign languages were thought to be important to international relations. The 1964-65 extension of the National Defense Education Act authorized NDEA's expansion to a number of the social sciences and humanities and the continuation of the National Defense Education Act science programs under the NSF authority.

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[5] Kenneth E. Boulding, "Note on the Research Priorities, Opportunities, and Strategies in the Social Sciences" (unpublished paper), pp. 7-8.

The final thrust of curriculum reform in education came with the passage of the 1965 Higher and Elementary and Secondary Education Acts, the 1967 Education Professions Development Act, and related more recent legislation. The purpose of that legislation was to create social justice in education. Expansion, efficiency, and defense may sometimes be used to serve imperialist goals. Only the last thrust, that which related to the civil rights movement, speaks to the issue of our making do with what we have and giving it comeliness. Too often even that goal has been sacrificed to administrative routine or conceptions of industrial efficiency. Witness, for example, the difficulty that the federal government has had in securing an expenditure of Title I funds, in the states, which really did serve the poor. Witness also the uses to which the slogans of accountability and competency-based teacher education have been put as Education Professions Development Act programs have been more and more forced to serve the cult of efficiency. In any case, the large scale federal investment in professional-societies and society-related projects begins with stage three, the education-defense thrust.

The Study Commission has not had defense-related goals except that cohesive, psychologically healthy cultures may also make it possible for people to defend better their own immediate turf. It has been concerned that education serve the cause of creating healthy human communities. Its goals, spelled out in its final report and adumbrated in a dozen other documents, are to relate education to community planning and growth; to foster a federal teacher education policy under a single flexible nation-wide strategy that would show some attention to differences in culture and community; and to break the monopolies and sometimes insensitive procedures which have governed accreditation and licensing. We have been regarded as a systematically anti-professional group. We are not, but we do tend to want to limit the power of all professions to go their unquestioned way.

Five Problem Areas

The effort of this particular book is to trace out, from the Commission's perspective, what the effects of the professional societies are, and have been, in five areas:

> **First**, what have been their effects (1) on the curricula of the common schools; (2) on the preparation of teachers to teach in them; and (3) directly on their programs?
>
> **Second**, what have been the effects of the professional societies on educational reform in higher education? What have been their effects on the curriculum of higher education, on departmental divisions, and on the process of homogenizing of colleges and universities?
>
> **Third**, what is the informal curriculum of a professional society? How does it school its members and is the schooling based on sound educational principles?
>
> **Fourth**, what is the accreditation activity of professional societies, and how does it affect the education of teachers?
>
> **Fifth**, what is their lobbying activity, and what is their effect on undergraduate education and the schools?

It may be useful to summarize what we found in each of these five areas.

Area One: Professional Society Effect on School Reform:

In the reform of formal curricula, the professional societies seem to have had different kinds of effects in the different areas. The effect on science seems to have been the development of curricula which represent what scholars doing the most advanced theoretical work regard as a responsible representation to children and youth of problems under consideration. On the other hand, the science curricula have been criticized as failing to give children precisely what they were intended to give: that is, an understanding of how scientists think, of the tentative world in which new scientific ideas are tried out. Some feelings for this are communicated in David Hawkin's essay "Messing Around With Science" and in the essay included in this book entitled "Management Principles in Education" by Peter Hilton. Hilton also discusses how mathematical language is being misused in curricula not created under the guidance of professional mathematicians (as he sees it), curricula depending on a behavioristic picture of how people know which is ill-suited to mathematical learning. Further criticisms of the math-science curricula done under 'professional' sponsorship, are developed by Morris Kline: he believes that the applications of mathematics in science were almost ignored in the new work as was also the recruitment and education of teachers. Kline says that good teachers can make any curriculum work (p. 54). Since mathematics still has a shortage, recruitment and training remedies are still available to it.

In social science, the curricular reforms of the late 60's and early 70's appear to have mitigated the extent to which education representing most social communities in the schools was, in the 60's, in Jules Henry's phrase, "education for stupidity." The new curricula do provide students a better picture of the economy, the political process, the third world cultures, and the nature of culture in general. Some history of which we are not proud now gets in. Study Commission statistics suggest that whatever has been gained by the employment of new curricula may not be reflected substantially in the classroom. The new social science curricula are less widely used than those in the sciences, and both teachers-in-training and teachers appear to have difficulty visualizing a social order at variance with the myths of the old curricula and of a racist American past.[6] Teachers in training in 1970, after a decade of civil rights struggles, expressed, according to our analysis of a Carnegie 1970 survey, a racism, an indifference to the facts of culture, and a general indifference to the political process in the United States which hardly suggests that they are in a position sensitively to communicate the new stuff done by the societies. Social science teachers were more in touch with social reality than were teachers in some other areas, but the differences were not striking. Moreover, both the social sciences and the sciences seem to have pretty completely ignored the work of several decades of anthropologists and ethno-scientists who have been trying to understand the indigenous scientific schemata of non-Western cultures, the different uses which they have, and their relationship to Western scientific schemata. To the degree that this has been the case, the schools have become the transmitters of the single scientific culture which, at least in Claude Levi-Strauss' view, has, as its end, the transformation of nature rather than of those ethno-scientific schemata which have as their end the individual's or the group's accommodation to nature's voice. It is possible to argue that this is right—that there is no such thing as Navajo or Mennonite physics. It is also possible to argue that indifference to minority views as to science, technology and policy is denying us alternative patterns of development in a period of fossil food shortages.

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[6] Cf. Paul A. Olson, *Study Commission Final Report* (Lincoln, Nebraska, January, 1975), pp. 1ff. Cf. the forthcoming Study Commission final report, Chapter II, for Carnegie statistics on racism of teachers-to-be.

The humanities curricula exhibit the same excellences and shortcomings as the curricula in the social sciences. At their best, they are exciting, profound, and useful; at their worst, they are alienating, drab, pedantic.

Reform in the curriculum was accompanied by an attempt to reshape the education of teachers through institutes in the disciplines for in-service teachers (NSF and NDEA Title XI institutes) and through the reshaping of the licensing requirements for pre-service teachers. The in-service thrust did not last long; after the federal money ran out, few institutions of higher education and few school systems continued the institutes in their old form.[7] They had served their purpose. Licensing was a bigger fish. Under another head, we will take up the question of the degree to which the recently developed licensing requirements conformed to the criteria of *Griggs* and other court decisions.

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[7] This was, in part, confirmed by a USOE study of the institutes by Evelyn Perloff, a document which may have been unfairly harsh to the institutes. Study Commission correspondence with the former institute directors, however, suggests the same thing.

Here it may be useful to remark that [illegible]st present licensing requirements in the disciplines do reflect the basic axioms of the curricula developed by the professional societies, under professional society auspices, or by persons closely related to professional society leadership. They do so because they were developed by joint action among the various discipline-oriented professional societies and the representatives of the National Association of State Directors of Teacher Education and Certification (NASDTEC), a non-government sponsored group including the licensing officers from the states.

The new guidelines then were pushed successfully in the states by NASDTEC and the societies. This action developed nationwide licensing standards attached to the titles of "specific areas to be covered" which could be very easily interpreted as courses and which were, on a standardized basis, supplied textbooks by the publishing industry. It meant a continued homogenization of teacher education nationally and little analysis of local need. The new was better than the old, more rigorous intellectually, but it was not more sensitive to the educational *genius loci*. And the professional societies have continued their effect on schooling and teacher training through cooperation with the National Teachers Examination and the National Assessment of Education Progress, both of which have had, and may continue to have, destructive homogenizing effects and equally destructive effects on educational justice "unless something desperate is done."[8]

Area Two: Professional Society Effects on Higher Education

It is often argued that the schools emulate higher education; however, it is not fair to attribute the fundamental structures in the management of knowledge in either the schools or higher education to professional societies.

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[8] The relationship of the professional societies to the National Assessment is described in B.O. Smith (unpublished summer institute document); the National Council of Teachers of English has indicated to the Study Commission that it does not endorse any particular version of the National Assessment in English but assists in locating resources for the National Assessment group. The National Assessment of Musical Progress attributes its standards to professional discipline leadership help. Cf. Study Commission final report, Chapter IV, for a discussion of the standardizing effects of the Assessment. ETS confirmed (telephone call, April 3, 1975) that "in general we work with the national professional societies in preparing the NTE." Cf. Carmen J. Finley *et al., The National Assessment Approach to Exercise Development* (Ann Arbor: National Assessment, 1970), pp. 47-48. Professional societies which the National Assessment works with are: IRA, NCTE, NCTM, AVA, AHA, and several others not discussed in this book.

Those structures—the department, the major, the full-time equivalency, the credit hour—are products of efforts to relate higher education to other institutions in the educational realm or to outside fiscal institutions: to standardize pension schemes, to determine what constitutes a high school graduate, an entering freshman, and a transferrable credit. Eventually, no element of judgment or wisdom whatsoever was necessary in the assessment of who was educated and who was not.

However, once the notion of departments was set, the range of possible departments was limited by the range of claimants to the possession of an 'intellectual discipline'. The notion that every college had to have an English department, a chemistry department, a history department, and a physics department was standard, as was the sense of the range and style of courses to be offered in most departments. The sense of tribe entered in. I have often heard the phrase, "He may have an interest in More (or Fanon), but in his heart, he is a history department man." And the sense of duty to professional training contributed no small bit to sameness.

Professional societies or their representatives working with NASDTEC endorsed a series of courses as necessary to the achievement of a license and made it almost obligatory for institutions of higher education to include those courses in the curriculum. Since teacher training constitutes, in most years, one fourth to one third of higher education, few institutions will leave out of their catalogs the license-related courses.

To the degree that the required courses are courses in the science, social science and literature of Western civilization as opposed to non-Western civilizations, teachers-to-be are required to attend to the civilization or culture of only one of their potential audiences, and not that of Native American, Chicano, Afro-American or Asian peoples, not generally to that group of people which Michael Novak has lumped together as the "Poles, Italians, Greeks, and Slavs (PIGS)."

Behind the authority of the professional societies in creating the licensing requirements and the curriculum paradigms has been the myth of the discipline: the notion that 'intellectual disciplines' are communicated by 'professionals' from 'professional societies' who, because they know the discipline, can determine what the intellectual regimen of the archetypal department should be. Yet, many 'professionals' when asked to define their discipline have fierce internal quarrels as to what its claim is. Many are clearly in what Kuhn calls a pre-paradigm situation having no agreed upon methodology or a range of them. Yet, all claim approximately the same rights in determining school and college programs. Implicit in the very mode of federal funding of the 'disciplinary professional societies' is a conception of the organization of knowledge and of the proper organization of an institution which has been increasingly called into question by studies in human learning and studies in the nature of investigative disciplines. For example, the fundamental tenets of those disciplines which were undergoing radical paradigm change (i.e., the biological sciences under the influence of phage biology or linguistics under the influence of Chomsky) were in such dispute that determination of what the 'discipline' was that was supposed to go into the schools was not a matter concerning which even 'professionals' could achieve anything close to consensus. Linguistics had to have three kinds of NDEA institutes to satisfy the sects.[9] Yet it claimed to be a discipline. Literature and history did too.[10] Where what the 'discipline' or 'paradigm' is is in question, it may be more useful to conceive of education as something other than a mental discipline or professional regimen: as a querying, a looking around, or survival practice. The more tentative the 'discipline', the more tentative should be the governance of the organization of reform, the more open to new currents and criticism.

Area Three: The Informal Curriculum of the Professional Society, Democratic or Authoritarian, and the Society's Capacity to Support Education Reform

Stephen Toulmin, in his *Human Understanding*, has portrayed professional societies as environments where ideas fight for survival, where they find a proper ecological support structure, and survive or where they are appropriately critiqued and die.[11] For such a system to work, new ideas have to have a chance of surviving, and Toulmin raises the issue of extrinsic dictatorial practice in the professional societies in connection with Sir Isaac Newton's eighteenth century domination of the Royal Society. Newton's powerful intellectual authority in the society after the time of his developing the *Principia* led him also to claim a political authority which did not derive from the strength of his ideas.

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[9] The divisions over CEEB "Summer Institutes" in linguistics, the basis of USOE summer institutes, were described to the Study Commission director by Professor Nelson Francis of Brown.

[10] See the section on the AHA below, pp. 142-46.

[11] Stephen Toulmin, *Human Understanding* (Princeton, 1972), I, 94ff, 126ff, 280ff.

Surely the temptation must be strong for any group possessing knowledge which is useful, esoteric, powerful, for any individual who discovers such knowledge, to gather strangth from this for tangential personal political agendas. Since professional societies are now often no longer ruled primarily by the most distinguished scholars in their fields, but by those who have organizational skills and are willing to spend long hours at bureaucratic labors, it may be increasingly important to scrutinize their use of their power and authority, particularly in the cause of good teaching.

The societies not only 'educate' through their conduct of business, their reward structure, and the paper 'dialogues' they sustain; their annual meetings are classrooms where professionals in teaching and research read papers to other professionals in the same areas. Recently the Modern Language Association has looked with some concern at the lack of pedagogical care that goes into professional society section meetings where scholarly papers are read: meetings where almost no one attends; where the noise level prevents hearing the speaker's presentation; where several people sleep; where kindly people year after year promote one another or one another's students as a means for keeping a society sub-group going.[12] The unprofessional *and* authoritarian character of such a system was MLA's concern, and it has taken action to improve matters. No matter how much the casual visitor to the professional society meeting may feel that he has met Dullness itself or that he has entered the all-enclosing hour of Night Primeval and of Chaos Old, where "one by one, at dread Medea's strain,/The sickening stars fade off the ethereal plain," he should note that every performance is recorded back home at the scholar's university and enters into his promotion and tenure considerations, no matter how bad the 'teaching done' by the performance. This lack of enthusiastic concern for quality teaching is reflected not only in the quality of the teaching exhibited in the annual meetings, but in the history of professional society efforts to place 'pedagogy' in a sub-branch of the society, to divorce federal funding for research from funding for pedagogy, and to rip off some of the curriculum projects without changing the fundamental values of the profession. Few of the societies have ever taken textbooks seriously as a matter for professional criticism, and fewer yet have taken the criticism of the creation of tests seriously.[13] A few societies *are* working hard on the quality of their own programs *and* on school reform. They should be supported.

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[12] This concern was developed by Executive Secretary William Schaeffer and furthered by the MLA "Committee on Research Activities" and its "Executive Committee."

Originally our examination of the informal curriculum of the professional society was based on the notion that the most democratic professional society would be in the best position to encourage democratic governance in the schools, to push for the sort of sensitivity to differentiated styles of learning and maximum participation by parents and laity which we deemed important.

Professional societies vary greatly in the degree to which they permit "anyone interested" to become a member, in their voting regulations, in the percentage of their members who vote and participate. Annual meetings may be controlled by a single person, by a little executive committee, by a complex bureaucratic process, or by a fairly direct sort of democracy. Harland and Sue Bloland have traced, in their recent book, how the late 60's societies altered their political processes so as to make them less amenable to use of such "tactics" of influencing people as direct debate, confrontation, "take-over" at the business meeting. The consequence was the development of business meetings which depended on mail ballots and extensive bureaucratic rigamarole to get items before the house, and which guaranteed a steady state continuation of things.[14] Most societies have now achieved a steady state condition which does not promise much reform energy.

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[13] The National Council of Teachers of English is beginning to do an excellent job of critiquing present standardized tests covering aspects of the English language. It is not yet clear whether the testing agencies will listen to professional society advice in an area where industry pressure is also great.

[14] Cf. Harland G. and Sue M. Bloland, *American Learned Societies in Transition* (New York: Carnegie Commission, 1974), pp. 41-101 for three case studies.

Area Four: The Accreditation and Licensing Activities of the Professional Societies

The American Chemical Society accredits department by department. The American Psychological Association accredits graduate departments in clinical psychology. Few of the other societies accredit directly, though most of them accredit teacher education programs indirectly through National Associations of State Directors of Teacher Education and Certification. Recently the National Commission on Accreditation and Eligibility refused to recognize the American Chemical Society as a determiner of federal eligibility on the grounds that its accreditation was sloppy, frequently conducted without visitation, that it seemed to serve no purpose other than the promotion of membership in the American Chemical Society and the establishment of a standard curriculum.[15] Some professional societies appear to have turned aside from departmental accreditation as a practice, partly as a consequence of internal decisions made by the membership of the societies themselves, partly as a consequence of the Newman Committee recommendations and partly because of fear of anti-trust litigation. As Harland and Sue Bloland observe:

> . . . generally learned societies lack both organizational resources and a clear mandate from the members to undertake formal accreditation procedures. A committee of the American Historical Association undertook in 1969 to establish criteria by which graduate departments of history could be evaluated by the profession. . . . The project was abandoned a year later, however, when the association was threatened with legal action by several departments dissatisfied with the evaluative procedure. Apprehensive that the association might be sued under the Sherman Act, the American Historical Association leadership chose not to become embroiled with a legal battle over the accreditation issue.[16]

Though the applicability of the Sherman Act to accreditation has not yet been settled in the courts, Study Commission-related lawyers have argued for the continued applicability of the Sherman Act to accreditation procedures.[17]

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[15] Cf. the account of the American Chemical Society, *infra*, pp. 32-39.

[16] Harland G. and Sue M. Bloland, *op. cit.*, p. 14.

The professional societies have not been timid to get into teacher education accreditation indirectly. There the professional societies do not by themselves accredit. Rather they work with national accreditation associations (NCATE) or state accreditation offices (NASDTEC) to develop the standards and, in some cases, assist in securing team or council members. A typical NCATE evaluation of an institution's work in the disciplines is described as follows in the Study Commission's final report:

> One Michigan school reports that its programs "follow," "meet," or "surpass" the guidelines or recommendations of the following organizations: National Art Education Association, Committee on Undergraduate Education in the Biological Sciences, National Business Education Association and Delta Pi Epsilon National Communication Association, American Economics Association, Joint Council on Economic Education, NASDTEC Committee on English, American Council on Teaching of Foreign Languages, Commission on College Geography of Associations of American Geographers, American Home Economics Association; as well as National Council of Family Relations, American Council on Industrial Arts Teacher Education, National Association of Industrial Teacher Educators, American Vocaticnal Association, American Technical Association, Committee on Undergraduate Education Program of Mathematics Association of America, American Association for Health, Physical Education and Recreation, and the Council for Exceptional Children. Further, it reports that four programs are accredited or approved by the American Chemical Society, the American Library Association, National Association of Schools of Music, and American Speech and Hearing Association. Clearly the influence of these national societies and associations is pervasive at this particular institution, an institution ranking second nationally in the number of teaching certificates issued annually.

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[17] Cf. Chapter III, Study Commission final report, in press.

NCATE-professional society rubrics may be accepted unquestioningly and used in the evaluation of the institution's use of the intellectual disciplines in training teachers apart from any serious analysis of the competence of the school's graduates to teach what needs teaching, given a specific community's priorities, or its effects on the common school students in the "service area" of a college educating teachers.

The case of the National Association of State Directors of Teacher Education and Certification (NASDTEC) is more complicated. As each of the curriculum reform movements in the disciplines developed, NASDTEC developed, in consort with the professional society, a series of national meetings designed to produce among the professionals in the states a consensus covering what a teacher-to-be ought to take to get a license. These meetings were carefully orchestrated nationally. In the case of one discipline, the group representing the professional societies agreed on recommendations for state-for-state licensing guidelines one day; NASDTEC agreed to the same guidelines the next day.[18] In such circumstances, the possibility of public input is severly curtailed. Some of this NASDTEC-professional activity has been federally funded.

The NASDTEC guidelines have subsequently been adopted in most of the states and thus have become in effect, state-mandated but nationally homogeneous accreditation-licensing standards. Sometimes, the adoption was accompanied by considerable professional society lobbying, according to reports received by the Commission. Departmental enrollments were obviously puffed by the requirements. Fortunately, the social studies have not yet received NASDTEC-professional society treatment. Typical NASDTEC guidelines which emerge from this sort of process are those in chemistry and in English. The NASDTEC secondary English standard requires a study of phonology, morphology, syntax, vocabulary (etymology and semantics), metalinguistics (relations of language and society–for example, usage); English and American literature; non-English literature in English translation; contemporary literature; adolescent literature; and so forth. The chemistry standard appears to require organic, inorganic, analytical, and physical chemistry plus physics, biology, and mathematics through calculus. When such "tags" are interpreted by the colleges, they are commonly interpreted as conventional undergraduate three to six-hour departmental courses, the courses are required, and the teaching major is filled up with courses which may or may not be those most germane to the environment of the institution or the culture of the children to be taught by its graduating teachers.

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[18] The procedure used was described to the Study Commission by Michael Shugrue, phone interview. Cf. Michael F. Shugrue, *English in a Decade of Change* (New York, 1968), pp. 108-09.

One third of higher education falls under such rubrics. It is not clear whether such processes carried on by the state are susceptible to litigation under the Sherman Act. It is clear that state accreditation has an authority which NCATE-style "voluntary" accreditation does not have. However, it is also equally clear that the standards which have been developed through the collaboration of NASDTEC and the professional societies are standards which are not validated, that they may in fact constitute non-job specific impediments to the holding of a job as interpreted by the *Griggs* decision. Moreover, resting licensing with states and the communities is rendered perfunctory if all local jurisdictions require the same stuff for a license, no matter what the culture of the region.

One licensing instrument, the National Teachers Examination, embodies information on general education and the specific disciplines which is thought to be the kind of information taught in normal undergraduate education. It *has* been held to be a non-job specific impediment to the holding of a job in the *Walston v. Nansemond County* case.

Having looked at questions in the NTE testing general education (e.g., a question requiring the answer that Althea, Lucasta, and Julia were poetic mistresses of the 17th century Cavalier poets), the court held:

> Here the tests measure the person in the abstract. . . . If these questions are a fair example of the remainder of the examination, any connection between the examination and effective teaching is purely coincidental. The NTE, as used by the Board, does not propose to measure the teacher's actual knowledge of the subject matter assigned to be taught on his performance in the classroom, but places primary emphasis on general education and professional training.

Academic courses having a nebulous relationship to the holding of industrial jobs have also been declared illegal in the *Buckner v. Goodyear* case.[19]

What we will undoubtedly see in the future is a much more specific effort to relate teacher education to the specific audiences to which it is directed. The *Lau* decision and others like it may require specific bilingual, bicultural curricula directed to specific audiences and communities. Two national groups of Arts and Science deans have supported a careful review of discipline-related requirements in teacher education in their colleges.[20] If the state accreditation or "program approval" requirements are not challengeable under the Sherman Act, state licensing attached to program approval may be challengeable under *Griggs*.[21] Whatever the outcome of the judicial review, common sense dictates that those in the disciplines be subjected to a very careful inspection in the light of the needs and envisaged future of the communities which lie in the service area of the institution.

Area Five: The Lobbying Activity of the Professional Societies

Harland and Sue Bloland describe the charges which were made against the professional societies by the so-called radicals in the late '60's and early '70's. Among these was the charge that the societies are little more than lobbies. In speaking to the societies, we endeavored to probe to what extent they were engaged in formal or informal efforts to "persuade the government" either in the Executive or the Legislative branch–particularly to get the government to serve the interests of their constituents more vigorously. The Blolands describe the recent move of the headquarters of several of the societies to Washington, D.C., the way in which the societies act as consultants to the Congress and to the bureaucracy.[22]

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[19] For *Walston v. Nansemond County School Board,* see Study Commission final report, in press, Chapter III; *Buckner v. Goodyear* (339 F.Supp. 1108, 1972).

[20] This position was taken by the Council of Colleges of Arts and Sciences and the National Association of State Land Grant Universities and Colleges "Commission on Arts and Sciences at a meeting with the Study Commission directorate, May 29, 1974.

[21] Cf. Study Commission final report, Chapter III, in press.

[22] Harland G. and Sue M. Bloland, *op. cit.*, p. 17 and pp. 5-15.

They describe further the constraints which are placed on the professional societies through the provisions of the Internal Revenue Code. The 501(c)3 provision provides that societies should not "devote more than an insubstantial part of their activities to attempting to influence legislation by propaganda or otherwise, or to directly or indirectly participate in or intervene, including the publishing or distributing of statements, in a political campaign on behalf of or in opposition to any candidate for public office."[23]

They also show that, for some societies, the federal lobby road was first taken with lobbying for change in school curriculum and teacher training (pp. 67-68). It is difficult to determine what the legal definition of a substantial part of one's activities would be. However, it is clear that several of the associations, the Modern Language Association, the American Vocational Association, the American Historical Association (as well as the Big Six and the One Dupont Circle "administrator lobbies"), engage either in direct lobbying with the Congress or a good deal of indirect contact that is hard to distinguish from lobbying. In some cases intermediate organizations have been used. In a few cases the scope of the lobbying has been such as to constitute a national scandal. The case of the American Miscellaneous Society in the hard sciences is perhaps the most obvious. In that case, a virtually nonexistent society was blown into a rubber elephant. A society fundamentally a joke was used as a device to lobby for and mount a national project costing millions of dollars—to secure the collaboration of the National Science Foundation, the National Academy of Sciences, the Congress, and the Executive. Chicanery of that sort is not usual among the professional societies, and from their perspective what they do undoubtedly serves the public interest.[24] For myself, I can say that I have rarely attended a meeting with representatives of the OE bureaucracy or observed the passage of education legislation in which one of these groups did not have a strong hand: the big six lobbies described in Summerfield's *Power and Policy*, the One Dupont Circle "Higher Education" lobbies which support university administrators, or the professional society groups described in this book. In some cases, the lobbying in the Congress and the "advising" of the Executive branch after the money is appropriated have been done by the same people. In some cases, shirttail contacts are used. The lobbies often determine what data is gathered on the process of education in America through the special access they have had as advisors to the National Center for Education Statistics and which they once had as advisors to the OE "Bureau of Research." The net effect of the lobby work is a bundle of categorical programs in teacher education, each with its lobby in Congress and the Executive, each contributing to a 'territorial' strategy and to the absence of any unified national strategy for meeting local needs and developing coherent local missions for institutions educating teachers.[25]

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[23] *Income Tax Regulations*, 1967, pp. 33, 435-36. Quoted Harland and Sue Bloland, *op. cit.*, p. 18. There is some tendency for education-related organizations to surrender their 501(c)3 status. The AFT has never had such a status; and, according to a study by Seth Brunner for the "Student Committee" of the Study Commission, the NEA recently abandoned its 501(c)3 status and asked to be reclassified for tax purposes. It now explicitly recognizes its lobbying character and its political character. Some of the education groups and professional societies studied in this book are also studied as lobbies in Harry L. Summerfield, *Power and Policy: The Formulation and Limits of Federal Educational Policy* (Berkeley, 1974), pp. 10-39.

[24] See the essay on the American Miscellaneous Society by Daniel Greenberg, *infra*, pp. 65-83.

The public interest ought to be defined by public representatives; if public representatives wish to use the advise of 'producer groups' such as the 'professional societies' and 'learned societies', they ought to be at least as eager to use the advice of consumer groups, parents, students and minority groups worrying about education. Private contact between the Congress and individuals on the executive committee of a professional society or closely associated with a major committee or on the staffs of the professional societies, ought to be construed more on the analogy of Mr. George Meany's playing golf with Mr. Ford than on the analogy of the philosopher offering the counsels of wisdom to philosopher kings. All advising of the Congress and the Executive (including advice as to who ought to be on the panels for the bureaucracies which are engaged in evaluating proposals) ought probably to be similarly construed. Unless there are compelling public interest reasons, which Congress and the courts can identify, for asking the societies to offer counsel to the government, they should either not be asked or they should be asked on the basis of parity with 'consumer' groups.

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[25] Talcott Parsons in *The American University* sees the national and international disciplinary attachments of the profession as useful and necessary to the growth of the cognitive component of education; he does not examine the extent to which this detracts from a careful analysis of, and service to, its own environment. To put it in another way, the relationship between the national and international "disciplinary reference group" and "local service" is not studied. This issue is treated by Eric Margolis in a forthcoming book, *The Academic Disciplines and the Structure of Education*, by the SCUEET Academic Disciplines Committee.

The indirect line of influence from the professional societies to the Congress at appropriation times, from the same societies to the Executive at the time when the panels are composed and the funds let, is not completely charted in this book. Enough of the plumbing shows to suggest that a further investigation of the present scheme is in order, that the reclassification of several professional societies from the 501(c)3 category to the category of lobbies should be at least examined as a possibility by the IRS.

Some of the societies might wish to follow the NEA's lead and voluntarily reclassify themselves to give themselves more freedom. The net effect of this move might be not only to limit the special role of the professional societies as "consultants to the government," but to encourage the government to spend more of its own time looking for the most germane possible consultants, to include consumer groups and public interest representatives as very visible portions of all OE and NIE panels having to do with funding and resource allocation in teacher training and curriculum building. A further result might be to free the professional societies and learned societies which wish to relate to the government to do a very public job of advocacy. I, for one, would wish those societies which represent my interest (e.g., MLA since I am a professor of English) to do their advocacy publically, strenuously, with all the muscle they can command. But I would like consumer advocate groups to have the same access to the inner workings of the government and its satellites.

Recommendations

Recommendations to Federal and State Officials:

Recommendation I: The U.S. Office of Education and state agencies should have a continuing good account of the history of the professional and learned societies. Funding to professional societies in the past has been undertaken with the best motives but perhaps without good knowledge on the part of the Legislative or Executive branches. That is, few people really looked at the organization of the societies, their commitment to public school education, their concern for democracy in the schools, or their fiscal needs and need to use "public school projects" as a support mechanism. The effect of that sort of funding of curriculum reform and teacher training is well described by Peter Dow in a recent *EDC News*:[26]

> Those of us who have participated in the curriculum movement over the past decade have seen a profound change in the orientation of curriculum makers during this period. In the wave of science-based curriculum projects that followed the launching of Sputnik in 1957 there was little explicit attention given to the social purposes of instruction. The emphasis in those years was on the transmission of knowledge in the most economical form through the identification of central ideas, and on the invention of pedagogical techniques that supported and reinforced the child's natural curiosity and desire to learn. . . . During those years, no one talked much about the emergence of the child as a social creature. . . . While the curriculum leaders of the sixties were enormously effective in extending the scope of the curriculum to include many new areas of knowledge, and were equally inventive in developing new pedagogical approaches and techniques, they neglected to evolve a unifying social purpose for their reforms. Thus, inadvertently, they contributed to the curriculum fragmentation that we face today. The growing disaffection of both high school and college students from a curriculum that fails to relate learning to real-life problems is a measure of how far we still must go to close the gap between curriculum development and social need. . . . Now we are in the midst of a second wave of curriculum reform. . . . Where physics teachers were once content to enliven the teaching of their subject by having students "do physics" rather than read about it, now they are striving to help students "do something useful with physics," like unscramble a traffic jam or design a better security system. Where before

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[26] EDC (The Education Development Corporation) was in the forefront of the 50's-60's "curriculum reform" movement and developed curricula similar in style and content to professional-society developed curricula. Its testimony to the strengths and limitations of that movement is, thus, particularly important.

> it was enough to examine pond water to expose the mysteries of the ecosystem, now students are asked to apply such knowledge to solve pollution problems or to debate questions of environmental planning. . . . In these new efforts, we can begin to discover the broad outlines of an approach to curriculum making that relates the teaching of "disciplines" to the needs of society.[27]

The argument of this book is that professional societies which were not already deeply enmeshed in the needs of the schools and the needs of society ultimately failed when they tried to conduct, or relate to, curriculum reform and teacher education activities. They were not able to mobilize to support work in the schools and either touched an invisible minority of the members of their group or used the projects to puff graduate school ends or their own narrow fiscal ends. In consequence, the recommendation is that the United States Office of Education, NIE, or any state agency empowered to enter into a contract with a professional or learned society, should develop a picture of the history of the organization, and its use of its own funds to foster the goals contemplated, before public monies are spent on a government contract to get a group to do something which may not be part of its natural mission. Clear distinctions should be made between societies dedicated only or primarily to guild, graduate, or elitist goals and those dedicated on a long-term basis to the democratization of the intellectual life. This evaluation should not be based on the work in this book, which may be outdated by the time an issue comes up, but on a continuing examination by federal and state agencies planning to enter into an agreement. The findings of such a continuing survey ought, if contracts are let, to be available to consumer groups in education.

Recommendation II. The work of NIE or of the Fund for the Improvement of Post-Secondary Education (FIPSE) should be strengthened to include an examination of:

1. **The claim of the professional societies to "professionalism";**

2. **Their influence on the departmental structure;**

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[27] Peter Dow, *EDC News*, V (Winter, 1975), pp. 1-2.

3. The extent to which departmental structures are coterminous with "disciplines," "paradigms," or "investigation logics";

4. The extent to which undergraduate or graduate education could be strengthened if persons in the institutions using common investigative paradigms were put in touch with one another systematically in the teaching and research areas. (The AAU "Project on the Liberal Arts" appears to be attempting some of these ends.) Comparable kinds of examinations ought to be sponsored at the state level under rubrics such as those which permitted the creation of Evergreen State, the University of Wisconsin at Green Bay, Thomas Jefferson, D-Q, and so forth. The "requirements" of all departments should be examined *as requirements* by an independent agency such as one of the Centers for Educational Policy Studies to see to what extent they fulfill legal requirements of cultural neutrality[28] and to determine to what extent requirements relating to licensing which form the NASDTEC-professional society-state arrangements are job-specific and meet the criteria for job-relatedness established in *Griggs, Buckner vs. Goodyear, Mercado and Chance vs. N.Y.C. Board of Examiners,* and *Walston vs. Nansemond County.*[29]

Recommendation III. The examples of the American Miscellaneous Society and of a few other societies which have had either erratic, undemocratic, dictatorial, or unusually and unnecessarily elitist organizational structures suggest the need for a periodic public interest review of the several professional societies, their finances, organization, relationship of activity to mission, pedagogy, etc. by independent agencies such as the National Academy of Sciences, the National Endowment for the Arts, and the National Endowment for the Humanities. The review would be done from a professional perspective but the findings should be available to younger professionals and consumers.

Recommendation IV. The Commission on Accreditation and Eligibility

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[28] Cf. Study Commission, *Legal Issues Newsletter* (May, 1974), *passim,* for the concepts of cultural neutrality.

[29] Cf. David Rubin, *Amicus Curiae* brief submitted in *Walston vs. Nansemond County.*

should continue its review of the federal recognition of accrediting agencies and continue the sort of strict review extended to the American Chemical Society. In addition, the Commission's continuing review of NCATE should include an examination of the connection between NCATE accreditation and professional society standards and the use of both sorts of standards as the basis for accrediting institutions (which accreditation becomes an automatic basis for the licensing of teachers). Finally, though the federal government has no direct responsibility for NASDTEC-professional society-state guidelines, it has in the past funded part of the development of the present guidelines. Since they seem, on the basis of the *Walston vs. Nansemond County* case, to be suspect to judicial scrutiny, it would be useful for the Office of Education and NIE (1) to encourage judicial and research review of the present situation; and (2) to develop, or cause to be developed, possible alternative systems for describing work in the intellectual disciplines or paradigms which is specific to the job of teaching at various levels and in various communities and cultures. Such descriptions should also be adequate to the letter and spirit of *Griggs* and the EEOC guidelines.

Recommendation V. The Internal Revenue Service should examine the activities of the learned societies, of the professional societies, and of the "professional interest groups" (called "lobbies" and listed in *Power and Process: The Formulation and Limits of Federal Educational Policy)*[30] **to determine which of these should remain 501(c)3 tax-free, charitable organizations.** At the same time, professional societies may wish to examine their own activities to see if they do not wish to reclassify themselves. Simultaneously, significant efforts should be made to make certain that programs created by professional society, or professional lobby, pressure on the Congress are not also controlled by those groups in the Executive through a membership on the advisory and decision-making panels, functioning for OE, NIE, or other federal education and education-related agencies, of their executive secretaries, central committee members, or other senior staff and committee people.

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[30] Summerfield lists the following Higher Education groups: the American Association of Colleges and Land Grant Universities, the American Council on Education, the American Association of Junior Colleges (the One Dupont Circle Groups); he also lists the following public schooling professional maintenance lobbies: the National Education Association (NEA), the Council of Chief State School Officers (CCSSO), the American Association of School Administrators (AASA), the Parent Teacher Association (PTA), and the National School Boards Association (NSBA). Finally, he lists more specialized groups such as the American Library Association and the American Vocational Association (AVA). Summerfield, "The Education Lobby," *Power and Process*, p. 12.

It should be understood that none of this should be taken to imply that first-rate scholars and masters of the intellectual paradigms should not *as individuals* be involved in the development, setting, criticizing and evaluating of federal education policy having to do with undergraduate education and the education of teachers. In fact, the course we advise should make the federal agencies the more diligent to get the very best thinkers and researchers available to assist them and not to depend on organizational inertia to give them credit with those who regard themselves as professionals in the disciplines. However, this work should be undertaken in *cooperation* with educational consumers.

Consumer Recommendations:

Recommendation I. Consumers should demand that professional societies and 'professionals' be very professional. The investigations in this document trace out the various involvements professional societies have had in broad and specific areas of education. What the research does not indicate is a clear strategy for the consumer when he questions standards of behavior. Daniel Greenberg's analysis of the history of the American Miscellaneous Society (beginning on p. 65) suggests:

1. The possible need for a public interest monitoring of all professional society claims on public monies;

2. The need for some fairly consistent public scrutiny of the structure and claim to legitimacy of discipline-oriented professional societies (cf. Recommendation III, above).

What kind of structures are already in existence, and what kinds of action programs can be developed, to change obsolete institutions or sensitize them to community needs? The following list of people and places suggest some directions for appeal. If a student, parent, or member of the lay community feels that "professionals" have acted inappropriately, he may wish to write to one of the following groups:

1. National Student Lobby or the National Student Education Fund, 612 Lexington Place NE, Washington, D.C. 20002.

2. Council on Post-Secondary Accreditation (COPA), One Dupont Circle, Washington, D.C.

3. Institute for Responsive Education, 704 Commonwealth Avenue, Boston, Massachusetts 02215.

4. National Citizens Committee on Public Education, Suite 440, Wilde Lake Village Green, Columbia, Maryland 21043.

5. Special Committee on Youth Education for Citizenship, American Bar Association, 1155 East 60th Street, Chicago, Illinois 60637.

6. Education Law Center, Inc., Suite 800, 605 Broad Street, Newark, New Jersey 07102.

7. Childhood and Government Project, School of Law, University of California, Berkeley, California 94720.

Recommendation II. Consumers should organize to develop analyses of education which compete with professional analyses. Another possibility for ongoing inquiry would be the creation of a local consumer coalition panel designed to analyze—among other things—the potential of citizen participation in the schooling process. A panel such as this could:

1. Devise systems for establishing small panels in school neighborhoods;

2. Develop action programs as vehicles for citizen lobbying on educational issues;

3. Create systems (already used by mass media) which would aid communication of information on a small scale (within towns, communities, schools);

4. Develop packets of materials at various levels of difficulty on particular topics, suggesting strategies for action (topics might include

students' rights, curriculum reform, accrediting/credentialling processes, teacher training);

5. Investigate the character of textbooks used in local systems, the professionals who wrote the textbooks, the professional legitimacy of what is said in the textbooks, the professional training of teachers, etc.;

6. Maintain current lists of consumer interest groups in areas around the country, especially groups relating to educational issues.

Recommendation III: Consumer groups may wish to question the expenditure of state tax monies to support Higher Education memberships in discipline-oriented professional societies and Higher Education associations if it appears that the quasi-political or lobbying pressure of the agency runs counter to consumer interests or to the interests of a specific group, class, sex, or region. In some instances, memberships in discipline-oriented professional societies by individuals and travel to their meetings for professional, as opposed to research, purposes are paid by state tax funds (as are also similar memberships in Higher Education organizations by institutions of Higher Education and travel to their meetings by institutional representatives). That these organizations also engage in 'influencing-activity' at the federal and state level may be significant in the consideration of the use of tax funds.

Recently the governor of one of our less populous states called attention to the fact that his state spent $390,000 for such activities annually in all state agencies; of this amount, about $90,000 was spent for education-related groups (this did not include "research payments" for individual scholar's travel to professional society meetings which might include a significant amount of attention to the business and/or political side of discipline-professional society activity). In a letter to the legislature, the governor observes, "In some cases, these national associations under legislative or executive control take positions opposed by elected officials."[31] Where such situations exist, consumer groups may wish to question the use of state tax funds for lobbying or 'influencing' to achieve ends which may be inimical to the consumers' own interests or to the positions taken by their elected representatives.

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[31] Letter by Governor J.J. Exon to Hon. Richard Marvel, Nebraska State Legislature, dated March 20, 1975.

Paul A. Olson
April 11, 1975

THE SCIENTIFIC SOCIETIES: INTRODUCTION

> . . . We are no longer obliged today to suppose that the conduct of scholars and scientists, when assembled into professional bodies, is emancipated from the general laws governing the collective actions of other institutions. Individuals and organizations in fact exercise as real a power and influence over the development of science as they do in any other sphere of human life. Correspondingly, the roles, offices, and positions of influence within a scientific profession are worth fighting for—and are, in practice, fought for—as singlemindedly, methodically, and even deviously, as in any other sphere (Stephen Toulmin, *Of Human Understanding*, p. 267).

> . . . just as it would be convenient to discover a scientific establishment, it would be convenient to discover a rational pattern in the layout of the institutions of science, but no L'Enfant figured in putting together the scientific enterprise. The scientific leadership, furthermore, like inhabitants of a trackless jungle, find certain advantages in an amorphous landscape. Institutionally, the closest conformity to the substance of science is to be found in the scientists' professional societies. Since the establishment of the Academia dei Lincei in Italy in 1603, such associations have existed for the purpose of communication, companionship, common defense, and furtherance of professional interest. By generous definition, there were in the United States in 1961 nearly sixteen hundred scientific and technical societies, ranging from the tiny and whimsical American Miscellaneous Society . . . to the American Chemical Society and the American Association for the Advancement of Science, each with more than 100,000 members. The societies are generally catchall organizations open to anyone with at least minimal qualifications in the profession. As such they are too diffuse to wield significant influence in the politics of science (Daniel S. Greenberg, *The Politics of Pure Science*, p. 12).

The sixteen hundred scientific and technical societies working individually and at odds with one another may not exercise much concerted power.

However, certain major societies do have sufficient muscle to make their influence felt. Two are "umbrella" organizations (American Institute of Biological Sciences and American Institute of Physics) which represent numerous smaller, less individually potent associations operating in their respective disciplines. One (American Chemical Society) can rely solely on its size and the magnitude of its undertakings to insure its being heard. And the last (Mathematical Association of America) is the chief voice in its discipline in the area of education reform and is making a positive effort (through the Conference Board on Mathematical Sciences) toward uniting the factions in the field to present a common front. Other smaller subdisciplines that do not (or do not wish to) fit under the wings of these four major scientific orientations must rely on the practical applicability of their studies and/or their appeal to the popular imagination for their place in the fund-granting sun.

This power is exercised in the field of education, particularly with respect to the education of teachers. Two statements reprinted in part from a special July, 1971, edition of *Science Education News* tell how "The National Association of State Directors of Teacher Education and Certification is concerned with guidelines for the preparation of teachers in every field, and is particularly committed to guidelines development in joint effort with major national organizations in the various disciplines." (William P. Viall, executive secretary, NASDTEC). The NASDTEC guidelines for teacher education were developed by a well-orchestrated coalition effort with professional societies nationally and without the help of educational consumers. Sometimes NASDTEC and the professionals ratified each other's action days or hours apart. National accreditation of teacher education institutions also turns on recommendations of the professional societies in the disciplines. For instance, the National Council for the Accreditation of Teacher Education standard has read as follows:

> National learned societies and professional associations with special interest in curricula for the preparation of teachers have significant contributions to make to the improvement of teacher education programs. On the basis of extensive study and research, some of these organizations have developed guidelines for the preparation of teachers. It is expected that an institution will work out the rationale for its various teacher education curricula with due consideration given to such guidelines appropriate to the elements in the professional studies component. Due

> consideration means that the institution is acquainted with these guidelines and has critically examined them in relation to developing the teacher education curricula offered.
>
> Standard: *In planning and developing curricula for teacher education, the institution gives due consideration to guidelines for teacher preparation developed by national learned societies and professional associations* (1970 revision of the Standards, NCATE).

And NCATE's president has made the following pronouncement:

> With great pleasure the Council notes that more and more of the learned societies and professional associations are making definitive statements, representing the considered judgments of groups of academicians about preparation for teaching in the subject areas. . . . It urges that colleges everywhere, whether seeking accreditation or not, give very serious consideration to these recommendations. Attention to the guidelines through the years will surely make a great contribution to improvement of science teaching and to preparation of teachers of science for the elementary and secondary schools of this country (Rolf W. Larson, Director, NCATE).

NCATE not only controls accreditation but, in some cases, reciprocity of teacher licenses among states. The professionals are clearly in. The consumers are out.

Teachers Blamed for Lack of Change

The implication of all such documents of guidelines for teacher training prepared by teachers is that the teachers in the discipline fields really believe in improvement, i.e., change. But an issue of *Science Education News* contains this statement by J. Dudley Herron, Coordinator, Elementary Education Project, AAAS Commission on Science Education: "What now stands in the way of a vast upheaval in the teaching of science in elementary schools? Very simply, 1.2 million teachers who haven't learned that there is a new way to teach science, who haven't learned to deal with the new programs, who are frightened of the word 'science'." And there is this declaration from F. James

Rutherford, Chairman, NSTA Commission on Professional Standards and Practices:

> The basic operating assumption ought to be that science teacher preparation programs should be redesigned and evaluated in the light of an up-to-date model of what capable science teachers are like, that is, of what good teachers bring to their jobs in the way of knowledge and skills and of how they behave professionally.
>
> The characteristics of such teachers have been spelled out by science teachers themselves in the National Science Teachers Association's Annual Self Inventory for Science Teachers (ASIST).

It is not clear whether teachers are change-agents or impediments. If we now turn to the guidelines and standards promulgated by nationally recognized accrediting agencies and the most respected of scientific societies, we find some, but not very much, positive change in the manner in which the new teacher of science is to be prepared. *Guidelines and Standards for the Education of Secondary School Teachers of Science and Mathematics*, the most recent such document [published in May, 1971, by AAAS and NASDTEC, funded by the National Science Foundation (NSF)], presents the following outline for secondary school science teacher preparation:

(1) Experience that fosters humaneness in the teacher
(2) Ability to relate science to social problems and their solutions
(3) Philosophy of science
(4) Competence in science (minimal across all fields, with a high degree of competence in a specialty)
(5) Mathematics requirements for science teachers (through calculus, computers)
(6) Mathematics requirements for mathematics teachers (pregraduate qualification)
(7) Substantial computer experience
(8) Substantial experience in applications and models
(9) Communication skill
(10) Education and educational psychology
(11) Teaching methods and practice
(12) Continuous post-graduate study (with encouragement to join professional societies)

This program does not appear to be strikingly new or different from what is currently being required of students in teacher education programs or from what has been required in the past. Some comparisons may be helpful. The current requirements for a B.A. in Education at the University of Nebraska are these: 4 hours, Physical Education; 6 hours, English Composition (No. 9 above); 12 hours, Humanities (Nos. 1 and 3 above); 3-16 hours, Language; 0-5 hours, Logic or Mathematics; 8-15 hours, Natural Sciences; 12 hours, Social Sciences (No. 2 above); 4 hours, Education and Educational Psychology (No. 10); 6 hours, Educational Methods (No. 11); 6-40 hours, Practice Teaching (No. 11); 24-48 hours, Major Field. The requirement for a B.S. in Education at Loyola University of Chicago in 1960 were these: 12 hours, English Composition and Literature (Nos. 1 and 9); 12 hours, Languages; 12 hours, Mathematics; 6-8 hours, Natural Sciences; 18 hours, Social Sciences (No. 2); Speech (No. 9); 14 hours, Philosophy (Nos. 1 and 3); 6 hours Psychology (No. 10); 6 hours, Education and Educational Psychology (No. 10); 3 hours, Education Methods (No. 11); 6 hours, Practice Teaching (No. 11); 24-36 hours, Major Field. What may be new is the emphasis on "humaneness" and on "science and social problems," but it is not yet clear that these guidelines are being taken seriously. Comparison of guidelines and standards issued by different organizations and for different educational levels may have slightly different emphases or require more or less depth of study; otherwise they differ little from one another.

Little Effect From Professional Societies

We could repeat what we have said here with minor variation in any analysis of the efforts of the professional societies in the sciences to have an effect on undergraduate education. They have had some effect but not enough and that too mechanical, too lacking in concern for audience, and sometimes too dependent on the political power of the scientific societies rather than the conceptual power of a clear thinking theory-maker working on how young people might share his scientific perceptions. The professional societies in the sciences have the power they have largely because of the magisterial authority commonly assigned to the scientist as professional. However, the magisterial authority of the scientist only rarely extends to *human learning*, even of his concepts or paradigms. And, even at the height of the curricular revolution, few scientists who were important theoretical creators or "*magisters*" actually worked at the school issue. The interventions were largely a generalizing of the prestige of the theoretician to insure the realization of more narrowly professional or political goals. Other factors undoubtedly have entered in. The Darrow-Bryan confrontation in the courts over the teaching of evolution may have emphasized the need for "professional" as opposed to "popular" standards in the teaching of the sciences. The "post-Sputnik" controversies in education contributed to the widespread sense that American scientific education was educating children and youth in outmoded theories that had long since been rejected in advanced scientific circles, that it was generally lacking in rigor and in the sort of theoretical content that would create for the country a group of theoreticians or persons sufficiently in touch with theory to make engineering applications. This, in turn, led to the creation of a new role for the professional in the sciences in the creation of school policy in NSF and, in part, in the U.S. Office of Education. What was not raised at that time was the question of how theory changes, what role professional societies have in "theory change," and what the limitations of the judicial power of professional societies are in theory change, in determining school policy, and in determining what consequences the educating, in compulsory schools, of non-Western groups in Western (as opposed to indigenous) science will have.

The standard discussion of theory change and of the role of professional societies in theory change is contained in Stephen Toulmin's *Of Human Understanding.*

Toulmin's approach to the history of science is what he terms "populational" and "evolutionary." That is, scientists and scientific groups select among alternative theories in a fashion which is, in part, analogous to the actions of nature in choosing which species (or populations in an array) will survive and which will not. It is, in his conception, also in part analogous to the actions of courts in choosing how to set law where no legal precedents exist and new situations have come into being. Toulmin's analysis of the politics of the professional society in the sciences and its relation to conceptual change is sufficiently standard to deserve reproduction here. Toulmin's analysis also deals with the relationship between the elite "professional" or "learned" society and the outside world to which it turns its face, a general relationship which finds a special reflection in the relationship produced between the professional scientist and the outside world as they develop the process of licensing of teachers and work at the promulgation of theoretical concepts through the schools.

"Intellectual Professions: Their Organization and Evolution" (excerpted)

from Stephen Toulmin, *On Human Understanding*

The same set of collective concerns and ambitions confers unity and continuity on both aspects of a rational enterprise–both on the discipline which represents the intellectually organized product of that enterprise, and on the profession which is the socially structured human agency by whose activities it is carried forward. The central question for our analysis is how the institutions and roles, publications and incentive-systems characteristic of an organized scientific profession reflect, in their structure and historical development, the collective intellectual concerns and ambitions of the men working in the discipline concerned.

The very closeness of the relationship between the professional and disciplinary aspects of a science creates certain initial difficulties for us. For there are standing ambiguities in many of the terms we use when we discuss the content and historical development of a natural science: they are used in two distinct senses, one disciplinary, the other professional. We speak, for instance, of the intrinsic "authority" (or validity) of ideas, and also of the professional "authority" (or power) of institutions and the magisterial "authority" (or dominance) of individuals. Novel concepts, similarly, win an "established" (or validated) place in scientific disciplines, while institutions and publications win an "established" (or influential) place in the corresponding professions; and both ideas and institutions achieve this position by the favor of those influential individuals who form the "authoritative" professional reference-group, or "establishment." How is it, then, that institutional authority or power comes to be distributed as it does between the individual members of a scientific profession? And how does this professional distribution of power take into account, protect, and preserve the public ideals of a discipline–its collective aspirations and goals, procedures and criteria?

How Do Individuals Become 'Spokesmen'?

At this point, the relationship between the disciplinary and professional aspects of science raises again, by implication, one of the central problems of political theory: viz., how certain individuals can become "authoritative spokesmen" for whole professions, social groups, or even nations. Suppose that we are puzzled by some phenomenon in genetics (say) and ask, "What does biochemistry tell us about this?" Two things are then clear. First, biochemistry—or any other discipline—can tell us nothing, except through the mouths of human spokesmen; and secondly, not every biochemist speaks *qua* biochemist with equal authority. In such a context the term "biochemistry" becomes, in effect, a grand political abstraction—like "France," the "American people," or the "international working class." The question, "What has biochemistry to tell us?", has accordingly to be understood obliquely, like the questions, "Where does France stand?" and "What is the attitude of the trade unions?"

In scientific as in political affairs, the easiest course is to ignore this question, and to assume that all "authoritative" or "established" judgments express an informed consensus on which the entire profession is agreed; whether for brevity or for more tendentious reasons, we are tempted to talk as though the rubric, "*It* is known that so-and-so," meant simply, "*Everyone* in the profession knows that so-and-so." In science as in politics, however, this view rests on a convenient fiction. **Pure syndiocoanarchism and participatory democracy are no more of a practical reality in the actual life of a scientific profession than they are anywhere else.** In this respect, intellectual professions are no different, in practice, from other theoretically democratic institutions. All accredited members of a scientific profession may, in theory, be equal; but some turn out to be "more equal" than others. On the one hand, there are the men whose word carries weight in the profession—the men whose judgments are accepted as authoritative by other workers in the field, and who come to speak "for and in the name of" the science concerned. On the other hand, there are the men who have no such influence, either because their opinions and attitudes are regarded as of no consequence, or because they are dismissed as heretical—and these men are in no position to act as spokesmen for the science that they serve.

Intellectual Authority Becomes Institutional Authority

When we say, "It is known that so-and-so," or "Biochemistry tells us that so-and-so," therefore, we do not mean that everyone knows, or that every biochemist will tell us that so-and-so. We normally imply, rather, that this is the "authoritative" view: both in the disciplinary sense, i.e. the view supported by the influential authorities in the subject. And the central problem about the relationship between these two aspects of a science can be restated, in terms of that ambiguity, as follows:

How is it that, within a well-organized intellectual enterprise, those ideas on which collective experience confers intellectual authority also acquire institutional authority? And what insures that institutional authority shall be exercised predominantly on behalf of views that are also entitled to disciplinary authority?

Suppose, then, that we accept the parallels between disciplinary and professional development in science. If the intellectual authority of concepts and theories rests not on universal, but on variable criteria and standards of judgment, the same is presumably true, also of the magisterial authority of individual scientists and the institutional authority of scientific organizations.

Novel theories and concepts win their intellectual place within a discipline by contributing to the solution of its current outstanding problems, and we can specify the exact demands of those problems only in terms of the current intellectual ambitions and explanatory capacities of that discipline. Similarly, individual scientists win their right to speak on behalf of their subject, only on account of the judgment that they have previously demonstrated in tackling the current conceptual problems facing their profession—and this judgment, too, must be assessed in terms of the current explanatory powers and ideals. Scientific professions, in short, are like all other social organizations. They have their "reference groups," comprising the men whose individual choices become—in effect—the choices of the whole profession. And any serious sociology of science must, in due course, explain by what processes the reference-groups of influential judges that exercise authority within a scientific profession constitute themselves, achieve dominance, exercise their authority, and are eventually displaced.

A new concept, theory, or strategy, for example, becomes an effective "possibility" in a scientific discipline only when it is taken seriously by influential members of the relevant profession, and it becomes fully "established" only when it wins their positive endorsement. Conversely, an innovation which the current reference-group declares "totally unsound" is, for the time being, as good as dead. There are, of course, two alternative ways of escaping from this condemnation: either to abandon the innovation or to change the reference-group. So the idea in question may be successfully revived under the auspices of a later generation of scientists, whose other theories can accommodate it more easily. Meanwhile, however, an "authoritative" judgment of unsoundness can be the death-sentence on a new hypothesis, on a would-be scientific institutiion, or even on an individual's scientific career.

How Is Position of Influence Reached?

By what career-sequence of fellowships and publications, editorships, university chairs, and committee memberships, then, does an individual scientist reach a position of influence, and enhance his ability to make his voice authoritative? Through what errors of judgment, failures, or defeats may he prejudice his earlier power to speak for his discipline? And what learned societies and "invisible colleges," journals and congresses, define the forum of competition within which the effective disciplinary contest between intellectual innovations is conducted? If all these questions were answered in sufficient detail, this would show us just how far the scope and opportunity exist for the operation of familiar political mechanisms, even within the most high-minded of intellectual professions: how (that is) the institutions of a science, like those of any collective human activity, develop through the actions of parties and pressure-groups, through *coups d' état* and unilateral declarations of independence, and are the scene of a continuing tug-of-war between Old Guards and Young Turks, autocrats and democrats, oligarchies and gerontocracies–so displaying the characteristic forms, varieties, and instruments of political life and activity generally.

To put the problem in these terms is not to speak disrespectfully, or cynically, of the learned professions. It is merely to recognize that power remains power, and institutions remain institutions, whether serving economic, political or intellectual functions. Until recently, of course, scientists have cultivated a public image of disinterestedness; and this has carried with it a pretence that the institutional activities of scientists–forming, as they do, the professional face of a "rational" enterprise–are somehow exempt from the general principles of political and social action. Happily and more realistically, we are no longer obliged today to suppose that the conduct of scholars and scientists, when assembled into professional bodies, is emancipated from the general laws governing the collective actions of other institutions. Individuals and organizations in fact exercise as real a power and influence over the development of science as they do in any other sphere of human life. Correspondingly, the roles, offices, and positions of influence within a scientific profession are worth fighting for–and are, in practice, fought for–as singlemindedly, methodically, and even deviously, as in any other sphere.

Scientific Profession as Political as Other Institutions

However much a scientific profession turns a stainless and unanimous

face to the outside world, therefore, its internal organization is as much a field for political action as that of any other institution. Here as elsewhere, the tranquil, orderly conduct of ballots and elections is only the culmination of a more complex and fluid process, involving lobbying and caucusing, procedural maneuvring and occasional skullduggery. And since, in academic politics, power and influence form the only freely negotiable currency, the competition for them is—arguably—liable to be even more intense there than outside.[1]

The central problem facing us in the political theory of the scientific professions accordingly resembles that of traditional *laissez-faire* economics. The development of a rational enterprise, like that of an economic community, can be analyzed on three different levels. We have the "common good" —represented by the historical development of the collective discipline, with all its accredited concepts, explanatory procedures, and strategies. We have the professional institutions of the enterprise—which exist, normally, with the sole function of serving the discipline, but which soon develop other independent interests, some of them unrelated to those intellectual concerns. And, finally, we have all the individual scientists—who have lives to lead and careers to pursue, as best they can, with an eye both on the ideal demands of their chosen discipline and on the practical realities of their professional situation. The problem then is to give a historically convincing account of the science, as seen from both professional and personal points of view, which makes it clear how intellectual, institutional, and individual factors interact; and how, in the course of pursuing their own legitimate interests, individual scientists and scientific institutions can at the same time promote the "common good" of their collective disciplines.

At a given time, any scientific profession includes a number of longer-standing learned societies, with comparatively well-established structures and traditions. These old-established societies tend to embody a somewhat conservative view of the scientific discipline concerned; and this tendency is reinforced by the very elaborateness of their internal organizations, since upstart young scientists with heterodox ideas will take correspondingly longer to win influential positions within their hierarchies. Alongside these established and conservative institutions, however, there exist other more flexible and informal groupings, which lack something in the way of social stature and degree of establishment, but serve as more effective channels of collaboration between the men engaged in front-line research. (Such informal groupings of correspondents and collaborators are referred to nowadays as "invisible colleges"—a name originally applied in the seventeenth century to the informal precursor of the Royal Society of London.)[2] In due course, the shared problems and intellectual approach, which served as an occasion for the original crystallization of an "invisible college," will normally lead to the development of a more formal organization, having the power to sponsor journals, congresses, and all the other trappings of a learned profession. And, in time, this new learned society will itself turn into an "established" scientific institution with its own traditional interests to conserve. . . .

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[1] I.A. Richards likes to point out that spleen and intrigue are traditional features of the scholastic world: recall Robert Browning's *Soliloquy in a Spanish Cloister.* Harold Wilson is also reported to have remarked that, after the rough-and-tumble of an Oxford Senior Common Room, it is a relief to return to the gentlemanly atmosphere of the House of Commons!

Variety of Career Positions Exist

There is a corresponding population of career positions in any scientific profession. From graduate fellowships on, by way of junior lectureships or assistant professorships, to senior university chairs and research directorships, the working scientist makes his way as much by the posts he occupies, and the institutions in which he occupies them, as by the papers he writes and the periodicals in which they are published. Yet here again, in any field of science, coexisting institutions and departments differ greatly in professional standing, and this "standing" is essentially a historical variable. **The relative standing of different research teams or laboratories, within a given science, is at the same time one of the more significant variables underlying the redistribution of professional authority, and also one of the subtler and more confidential variables, about which every working scientist knows much more than he will ever commit to writing. In this sense, professional standing makes its effect without being registered in any formal titles.** As with a "pecking order," it displays itself through the practical relations between the men and institutions involved; and those who feel a need to lay claim to such standing explicitly are most often reacting to a situation in which they are in danger of losing it. So, in any thorough study of the manner in which professional authority passes between scientific institutions, the question of "standing' will be especially worth investigating.

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[2] See, e.g., D.J. de S. Price, *Science Since Babylon* (New Haven, 1961); and also J. Ziman, *Public Knowledge* (Cambridge, England, 1968).

Similar historical changes affect the relations between the different communication channels of any science, between the various types of meeting in which the profession conducts its proceedings, and within the reward system of the profession. Different media of publication–textbooks, monographs, quarterlies, abstracts, and "review letters"–have been introduced, one after another, to meet new professional needs; and the historically changing operations of a scientific profession are reflected once more in the transfer of influence from one medium to another. The "invisible colleges" of seventeenth-century Europe were initially linked by the circulated correspondence of men like Henry Oldenburg. With the foundation of national academies, emphasis shifted to their Transactions and to treatises such as Newton's *Principia*, which were published under their auspices. In subsequent centuries, the balance has again shifted several times: to quarterlies, to twice-monthly periodicals, weeklies, and even shorter-term publications. The proliferation of journals and the acceleration of publication are effects, in part of the fragmentation of sub-disciplines, in part of the sharpened competition for priority; but they are associated also with a great decentralization of scientific authority. Where no-one can hope to master all the available concepts and theories, scientific professions were bound to move towards a pluralistic pattern of authority. On the very frontiers of research, indeed, we are now back not only with "invisible colleges" but with a multiplicity of Oldenburgs, who circulate duplicated "pre-publication" material in highly specialized subjects to an international circle of equally specialized devotees. In the more self-consciously original branches of science–it has even been suggested–only out-of-date ideas ever actually get into print!

Shift of Emphasis in Meetings

Scientific meetings, likewise, have taken different forms at different times, and have provided correspondingly different occasions for presenting original results. So we can plot a similar redistribution of emphasis, as between international congresses and annual professional meetings; between open sessions of Associations for the Advancement of Science and "invitation only" seminars; and those historical changes again reflect changes in the degree of specialization. Over the last few years, indeed, there has even been a slight reversal in this trend, with a shift of emphasis in the pattern of scientific meetings from ever more specialized sub-sub-disciplines to fields of interdisciplinary concern, e.g. environmental studies and the neurosciences.

As to the reward systems of science: at one extreme, the marks of professional success and "authority" take obvious forms, in the Nobel Prizes, fellowships and presidencies of the national academies, and the like. At appropriate stages in their careers, the prospects of these rewards give working scientists a genuine–sometimes a very powerful–incentive. They can even end, as the Nobel Prizes seem to have done, by distorting the balance of scientific work: distracting attention away from "non-prize-worthy" subjects (e.g. ecology and systematics) or rewarding restricted aspects of scientific work (e.g. profound theoretical reappraisals). At less exalted levels, the reward system of science is less tangible, but not less powerful. Long before he is in the running for his National Academy, a young man must establish his professional credentials with his peers, as a "sound" worker. For this purpose, he must demonstrate publicly, not only that he has mastered the critical standards of his chosen discipline, but also that his commitment to the discipline is single-minded and absolute, to a degree of exclusiveness demanded at other times only in the monastic orders.[3]

Any lapse from this commitment–frequent appearances on television, lucrative government consultancies, incautious excursions into popularization –will put his professional reputation at risk. So, until his personal standing in the profession is secure, the apprentice scientist will view such outside activities as professional poison, if not as outright sin. Once safely established in a position of authority, he may perhaps allow himself a few such distractions; until then, his "rule of life" requires exclusive devotion to the aims of his discipline. (It is rumored that J.D. Bernal once invited his scientist son to collaborate on a paper about some slightly unorthodox ideas, only to get the response, "It's all very well for you, Dad; but I've got my career to consider.") The analogies between the scientific professions and the monastic orders, pointed out by John Ziman, are in fact very close to the mark. In particular, the value system underlying both modes of life has been essentially "unworldly" and "single-valued."

Meanwhile, alongside the obvious public rewards of science, there is a much more influential set of informal rewards, based on the esteem in which the members of each profession hold one another's work. Like the "pecking-order" of rival scientific institutions, this personal order of merit among individual scientists is rarely committed to paper; but is none the less powerful for being tacit. It is a glorious thing to be President of the Royal Society.

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[3] See Ziman, pp. 138ff.

just as it is a glorious thing to be an Archbishop: but what novice will not prefer to win a reputation for brilliance (or sanctity) among his own peers, even if this later proves to be a disqualification for worldly office? And what middle-aged scientist is wholly free from the feat that, by accepting an institutional promotion, he will be admitting to his younger colleagues that he is past his intellectual best? Standing within this implicit hierarchy is not marked by formal titles or offices, but it is well understood by all those directly involved. Within the Order of molecular biochemists (or neo-Darwinian systematists, or particle physicists) everyone from the novices up soon develops a precise–if unwritten–sense of *Who's Who.* **And any serious attempt to map the historically changing patterns of authority within a scientific profession must face the delicate problem of assessing, not only the external signs of professional rank and the evident allocation of public offices and positions, but also the more significant internal pattern of esteem, which largely determines just whose novel ideas are taken seriously by other members of the profession.**

Locus of Authority in 'Standardized Texts'

One final locus of authority within a science consists in the "standard texts" of the subject; and, by looking at these, we can see more clearly how the intellectual transmit of a discipline becomes the collective property of a profession. Once accepted by Helmholtz and Tyndall, the kinetic theory of matter may have won an established place in front-line physical science; but what crowned its new authority was incorporation into a new generation of standard textbooks of physics–both elementary, e.g. Maxwell's own *Matter and Motion,* and more advanced, e.g. Thomson and Taits's *Treatise on Natural Philosophy.* Whereas the "micro-evolution" of scientific ideas is manifested in the most up-to-date research discussions (whether the letters of Darwin and Wallace, or the *Physical Review Letters*), its "macro-evolution" is embodied in the standard texts accepted as authoritative in each successive generation. From Rohault's exposition of Cartesian physics and Isaac Newton's *Opticks,* up to Ernst Mayr's *Animal Species and Evolution* and Feynman's *Lectures on Physics,* these standard works define the successive bodies of doctrine that form the accepted starting-points for the next generation. By digesting the specialized literature of the preceding generation, indeed, these comprehensive expositions create a "conceptual platform" on which the next generation of budding scientists can stand firm, in defining and attacking their own disciplinary problems.

In brief: the career-structure and administrative organization of a scientific profession, its channels of publication, meetings and reward systems all display the same pluralism and the same tendency for authority to pass from one group or individual—editor or president, professor or iconoclast—to another. This pluralism makes historical change within a scientific profession possible; yet, at the same time, it exposes the current professional authorities to criticism. And, if we consider the arguments used to justify such transfers of authority, we shall begin to see in outline how our own crucial question is to be answered: that is, how the organization of a scientific profession comes to serve the proper interests of the discipline it represents.

Power Held Through Implied Consent

The workings of scientific institutions exemplify, in fact, not only the same mechanisms and processes that govern political relations in all human institutions; they illustrate also the deeper principles and ideals on which all political power rests, by appeal to which it is justified, and in terms of which it is subject to legitimate criticism. The ultimate source of the power that office-holders in a scientific profession wield is the implied consent of their professional colleagues in the same discipline. But this consensus is also the ultimate sanction, by which their power is controlled and their conduct kept within reasonable limits. For the professional authorities in a science are open to a standing challenge: this consists, precisely, in questioning their claim to act as the current spokesmen of their discipline. However drastically the socio-political situation of a profession may change, however completely a single magisterial individual (a Newton, a Cuvier, or a Helmholtz) may dominate the science of his age, one crucial fact remains. Such positions of power are occupied, and utilized, "in the name of" particular communal disciplines, and so on pain of public forfeiture. In this respect, the plurality of coexisting societies, publications, and meetings is just one of many institutional devices for ensuring that power is used, patronage dispensed, and authority exercised with a sufficient eye for the collective goals of the discipline concerned.

Acting "in the name of" a discipline means acting as the guardians, for the time being, of its collective intellectual ideals; and the exercise of professional power is circumscribed within limits set by the collective commitment of these ideals. The men who exercise professional power *ex officio*—whether as editors or referees, presidents or professors—must be ready to meet challenges based on appeals to the current principles, procedures, and aims of their discipline. Indeed, if the institutions of a profession are to continue serving effectively the discipline in the name of which they act, their structure must provide means for the conduct of its officers to be challenged in this way. Such institutional opportunities will, of course, never be perfect. As in any other organization, Young Turks will often accuse the Old Guard of claiming more power than they deserve, or of hanging on to office after their legitimate authority is exhausted. Still, any professional institution must provide, in some way or other, for all the sociological functions implicit in its collective ambitions; and must accordingly reflect, within its own structure, the full variety of activities necessary for the development of the corresponding discipline.

So the collective ambitions which define the current intellectual preoccupations of a scientific discipline also have a crucial—indeed, a critical—institutional part to play in the working of the corresponding profession. The word "critical" is here used advisedly; at one and the same time, these collective ambitions define the current intellectual selection-criteria of the discipline, and also serve as the basis for judging the current performance of professional office-holders and institutional arrangements. If the research reports of one generation become the archives of the next, this change is to be justified by the current disciplinary purposes of the science in question. If the current preoccupations of the Nobel Committees are criticized as distorting the balance of current research, this objection rests equally on disciplinary judgments about the comparative urgency and "ripeness" of different lines of investigation. If the current organization of National Academies is denounced as a "gerontocracy," this again implies that a profession dominated by older men inevitably lags behind the true needs of a discipline. (Did the Royal Society really need until 1961 to discover that molecular biology was "ripe" for encouragement?)[4] And if, in retrospect, historians deplore the overwhelming power exercised by (say) Georges Cuvier in the French scientific establishment of the post-Napoleonic era, their criticisms too imply that Cuvier had a retrograde influence on the development of French biology: e.g. that he used his authority to pursue his earlier rivalry with Lamarck, and so imposed on French biology a hostility to evolutionary ideas which long out-lasted his own death in 1832.[5]

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[4] Stephen Toulmin, "The Complexity of Scientific Choice: a Stocktaking," reprinted in *Criteria for Scientific Development*, ed. E. Shils (Cambridge, Mass., 1968), p. 71.

[5] On Cuvier's political dominance, both as a zoologist and as a national statesman, see W. Coleman, *Georges Cuvier: Zoologist* (Cambridge, Mass., 1964), pp. 126-39; and also F.D. Adams, *The Birth and Development of the Geological Sciences* (New York, 1938), pp. 263-67.

Professional Power Misused Even at High Levels

No century in the history of science has, of course, been exempt from the tyrannous misuse of professional power, even at the highest level. So the dark brooding autocracy of Isaac Newton himself, during his years as permanent President of the Royal Society, launched the "Newtonian" world-picture, not just as a creative framework for physical speculation, but also as a dogma which later bore down oppressively when such men as Thomas Young set out to revive unfashionable aspects of Newton's own ideas. And, on a smaller scale, a multiplicity of similar tyrannies is continually being exercised "in the name" of science. Papers are refused publication, academic posts are denied, professional honors are withheld–even from an Ohm, a Mayer, or a Helmholtz–not for lack of worthwhile disciplinary arguments, but through professional disagreement with the editor, the research director, or the influential professor.[6] The only thing–but the essential thing–that redeems the scientific profession is the fact that all its claims to act "in the name of" a discipline are subject to appeal: if not within the framework of any one particular institution, then before the profession at large, and if not before a tribunal of the current Old Guard, then in the eyes of the up and coming Young Turks.

In all these cases, then, the operative question is: "How far do the structure, performance, and distribution of power within the professional institutions concerned enable them to meet the proper needs of the discipline for which they are acting?" This question can be widened still further, to become a question about the proper scopes of those disciplines themselves. For scientific professions "embody" their disciplines, not just by providing institutions and channels of communication for all the necessary activities of those disciplines; at a deeper level, also, their organization shows how the boundaries between different disciplines are currently conceived. Where, for instance, two prospective sub-disciplines have not yet developed separate channels of professional expression–whether separate journals, separate university posts, or separate research laboratories–they will not yet wholly have established their claim to be distinct, even on the disciplinary level. The intellectual question whether the demands of biological understanding require us to recognize "molecular biology" (say) as a separate discipline, alongside general biochemistry and cell-biology, entails also such institutional questions as whether molecular biology is entitled to its own separate societies, journals, and university posts; these institutional questions, likewise, can be answered satisfactorily, only in the light of intellectual judgments about the needs of the relevant discipline.

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[6] Even Helmholtz had his original paper on the Conservation of Energy rejected by Poggendorf's *Annalen*; on this episode, see Y. Elkana (forthcoming).

Treating a scientific profession as a historically developing entity, we can ask both how novel elements enter the relevant population and also how certain of these novelties subsequently achieve an established position with it. These questions can be raised about societies, or journals, or meetings; but they can be raised most usefully about the scientists themselves. The succession of human generations continually draws younger recruits into the scientific profession, and eliminates their elders. From generation to generation, as a result, men with new and different attitudes of mind are continually taking over positions of institutional power and individual dominance within their profession. So the changing character of a science is embodied, first and foremost, in the changing attitudes of its scientists.

Transmission Depends on 'Imperfect' Teaching Process

Let us look again at the transmission process by which responsibility for the intellectual content and development of a science passes from one generation of scientists to another. During their intellectual apprenticeship, younger men gain a grasp of the explanatory procedures, disciplinary ambitions, and overall picture of nature accepted by their immediate predecessors, and use these as one source of material in developing their own ideas about the subject. But the replication involved in the transmission of ideas is never absolutely exact. Within a scientific discipline, or any other genuinely "rational" enterprise, the teaching process is necessarily imperfect. Or, rather, the quality of the teaching process in such cases is measured not by the exactitude with which specific concepts are handed on, but by the critical attitudes with which students learn to judge even the concepts expounded by their own masters. From the point of view of the apprentices themselves, it is as though the intellectual content and program of their science had to be recreated afresh in every generation. Certainly, the views of the senior professors at whose feet they sit, or at whose benches they work, carry substantial weight with them; but their respect, even for the most eminent of their elders, will be highly selective. In due course, they will reappraise all questionable issues for themselves, criticizing their teachers' views in the light of the rest of their reading, of the reports they hear from their fellow-students elsewhere, and of the general intellectual climate of their time. . . . So each generation of apprentices pieces together the established—and variant—

concepts and procedures of its discipline into a pattern of its own.

We can now reanalyze, in more concrete terms, the reasons why the "natural time-interval" of scientific change has the magnitude it does. Within the graduate schools and research laboratories in which the intellectual content of the natural sciences is transmitted, one soon learns to recognize those shifts of approach, and even of strategy, that mark off successive generations of bright younger research scientists. One particular technique of research or style of theoretical interpretation may, very occasionally, hold its own among the most promising and talented novices for as long as seven years; at other times, there will be striking changes of approach or interpretation as little as two years apart. Either way, most significant changes will be allowed for, provided that we sample successive "generations" of research workers at intervals of three to five years. Correspondingly, we shall find significant variations in the reference-groups accepted as authoritative among professional scientists, if we choose our respondents in groups aged some five or more years apart. Is molecular biology a wild and exaggerated new fad; is it a fruitful extension of classical biochemistry; is it the beginning and end of all biological wisdom; is it a first step towards a larger theory of cellular function and morphogenesis; or is it already old hat? Which answer you get to that question will depend, very largely, on whether you talk to scientists who are themselves seventy, sixty, fifty, forty or thirty years old.

From the outside, it sometimes appears as though the transfer of intellectual authority from an older to a younger scientific group was made necessary solely by increases in the sheer amount of factual knowledge in a science. Our present analysis leads to a different conclusion. If after a time working scientists often find it hard to keep up with current developments in their subject, that is because succeeding generations are liable to approach the problems of their common discipline from a quite novel point of view, putting the old intellectual pieces together in a quite novel pattern and redistributing their emphasis in the light of fresh explanatory ideals; with the result that their interpretations may prove uncongenial, or even abhorrent, to scientists of an earlier generation. At their blandest, such changes may take place without rancor. Ernest Rutherford, for instance, came so close to creating atomic physics singlehanded that his successors (e.g. Bohr and Heisenberg) retained their intellectual respect for his views, despite his confessed inability to grasp the mathematical methods of quantum mechanics. For his own part, Rutherford bowed out from his authoritative position with good grace—admitting candidly that his own training left him unequipped to master the new abstractions, and hopelessly prejudiced in favor of a material model of atoms and fundamental particles, as "little hard billiard-balls—

preferably red or black."[7] At the other extreme, these intellectual takeovers involve a kind of hostility and spleen, on the side of the victors and of the defeated, that onlookers can only find distasteful and offensive. In science as in politics, the authors of a successful *coup* can afford to be magnanimous, but too often fall victims to the corruptions of power: falling for the temptation to dismiss their predecessors, however distinguished, as obtuse and unteachable old fogies.

Scientific Powers Lasts Limited Time

For instance, James D. Watson's superficially light-hearted account of the decipherment of the DNA molecule, in *The Double Helix*, often comes close to crowing over older biologists and crystallographers, who had at first failed to see just where he and Crick were going.[8] But, now that Watson is secure in the knowledge of what molecular biology has become, this triumphant manner comes easily to him, and it is salutary to compare it with the cautious tone of a much earlier letter to Max Delbruck reprinted at the end of his book, written at a time when the fate of his ideas still depended upon the good opinion of his seniors. Still, history brings its own revenges. Those who compete in the Sacred Groves of science should do so knowing that the Golden Bough will be in their keeping only for a limited time. Here as elsewhere, every transfer of authority helps to prepare the ground for the next. Having captured the key professional positions for themselves, the radicals of one generation are outflanked before long by the *fronde* of still younger men, for whom their radical novelty is already half-way to being stale news. In the quasi-political power plays which professional scientists quite rightly undertake "in the name of" their respective disciplines, institutional victories can never be more than temporary. Each new generation of apprentices, while developing its own intellectual perspectives, is also sharpening up the weapons for an eventual professional takeover. Five, ten, or twenty years hence, their word will carry weight in the profession, their authority will guide and reshape the discipline; and meanwhile, at their heels, still other younger men are coming along, who will in due course form the generation of their own successors. . . .

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[7] A.S. Eve, *Rutherford* (Cambridge, Eng., 1939), p. 384, reporting an after-dinner speech made by Ernest Rutherford in 1934.

[8] J.D. Watson's passing remarks about Lawrence Bragg and other senior scientists in *The Double Helix* (New York, 1967; London, 1968).

What light does this process of professional apprenticeship and generational competition throw on the institutional conditions required for the effective intellectual development of a science? We may touch on two aspects of this general question: (a) the role of the individual scientist—particularly, the relationship between the personal ideas and activities of scientists taken singly, and those which have an established place in the collective transmit of the science—and (b) the broader socio-cultural context within which a science can develop most rapidly and effectively.

. . . .

[Toulmin here endeavors to explode the "Great Man" view of scientific change and to show that change occurs through collective professional action.]

. . . .

The effective development of a science, both professional and disciplinary, depends on certain broader socio-cultural considerations.

(i) For instance, intellectual adaptation, as much as evolutionary adaptation of other kinds, can take place effectively only in somewhat special circumstances. A protected "forum of competition" [for scientific theories] is needed, if "better adapted" variants are to demonstrate their merits without being swamped in the larger population from which they were originally derived. The "ecological barriers" tending to isolate this forum must, at the same time, be low enough to permit the specialized "niche" to be colonized in the first place, yet high enough to prevent the resulting variants from fading back into the former population. In the most successful scientific cultures, therefore, the effective development of more adequate scientific concepts has gone along both with the creation of largely autonomous disciplines, and also with the emergence of institutionally distinct professions. This is no accident. Only in a situation within which the specialized "intellectual demands" of a science are clearly recognized and agreed upon can the adequacy of conceptual innovations be assessed with any hope of agreement. The professional "forums" of science thus play a significant part in creating the local "niches," surrounded by institutional barriers, within which conceptual variants can be publicly and critically tested against the theoretical requirements of the discipline concerned.

Professional Isolation Needed for Development of Ideas

Failing this professional isolation, and the critical control exercised by professional reference-groups, it will be much harder for novel ideas to stake out precise claims, and so establish their place in a well-founded body of knowledge. Instead, they will be lost in a welter of speculative debates and polemical objections, in which their characteristic virtues and implications can no longer be identified and explored. And, once the essential balance on which conceptual evolution depends is destroyed, there will be no stable equilibrium short of intellectual conformism or conceptual anarchy. Either—as at some times in Imperial China—an unspecialized opinion-forming group will end by exercising thought-control over general ideas and vetoing intellectual novelties simply for their novelty.[9] Or else there will be no effective control over intellectual innovation at all, and the speculative debate will proliferate in a way that provides no scope for critical judgment. In the former case, new conjectures will not survive for long enough to show what their real potentialities are; in the latter, intellectual life will fall into an incoherent toleration for all conjectures, without any authoritative judges responsible for deciding that some are more meritorious than others. (I recall hearing a well-educated Moroccan justify some utterly fanciful speculation by quoting the maxim, "Where nothing can be proved, every man is entitled to his own view.") Specialized scientific professions are, therefore, the institutional price we pay, in order to keep the twin activities of speculation and criticism—which are the human embodiments of conceptual variation and selection—working together in harmony. Just because the establishment of inter-disciplinary boundaries and the delegation of authority to distinct reference-groups results in the isolation of specialized professional niches, it is possible for conjectures to be put forward, tested, and judged in a selective, discriminating way, with an eye to the well-defined requirements of a correspondingly specialized problem-situation.

(ii) Conversely, the ecological success of novel forms requires that the "forum of competition" should not be too isolated. If the professional isolation of scientists were ever to become total, that itself would hamper intellectual evolution, in two respects. To begin with, the specialized problems and concepts of the sciences sprang originally from the broader intellectual concerns of people at large, and they are continually capable of reacting back on them. The task of deciphering the bio-physical processes by which norepinephrine (say) can cross nerve-membranes originally specialized out of—and can always reflect back onto—the more general problem, how the central nervous system can function as the organ of thought and experience.[10] So, on the boundary between scientific disciplines and extra-scientific concerns, questions are always arising about the broader relevance of specialized disciplinary novelties; and the full potentialities of new ideas can be kept clearly in view only if this interaction between specialized and extra-scientific concepts is allowed to continue.

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[9] J.S. Needham, *Science and Civilization in China,* Vol. 3 (Cambridge, Eng., 1959), see especially pp. 192-94 on the secrecy about astronomy in Chinese society.

Scientific Isolation Must Not Be Total

If the barriers around the scientific professions are too high, however, novel ideas which have proved their specialized scientific merits cannot spread outwards into the general culture, or win acceptance in the "public mind"; nor—in reverse—may the specialized disciplines of science attract enough outstanding recruits from each new generation to maintain their own professional vitality. A science which cuts itself off entirely from the broader intellectual debate will thus retain only a localized significance; its professional technicalities will have no power to influence "common sense" or "common knowledge," and the science itself will be in danger either of expiring or falling into the hands of second-rate men, for lack of good new recruits to cultivate it. Between A.D. 1290 and 1340, for instance, scholars at Paris and Oxford were forging an important link in the conceptual genealogy connecting the ideas of Aristotle and Archimedes to those of Galileo, with their scholastic analysis of motion.[11] At certain points, indeed, the fourteenth-century mathematicians came tantalizingly close to Galileo's starting-point: so much so, that we may wonder why—even after allowing for the effects of the Black Death—theoretical mechanics did not develop faster during the next 250 years. If physics developed so slowly during the period after 1350, this may well have been because the analytical methods in question were the possession of a narrowly-defined group of professional scholars alone, so that nobody else was in a position to appreciate their potential wider significance.

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[10] On this subject, see my essay "Neuroscience and Human Understanding," *The Neurosciences*, ed. C.C. Quarton *et al* (New York, 1967).

[11] This phase in the development of ideas about motion has been fully documented by M. Clagett in his book, *The Science of Mechanics in the Middle Ages* (Madison, 1961).

Certainly, the scientific implications of the fourteenth-century theory of impetus, with its graphical analysis of quantitative change, were fully worked out only from the mid-sixteenth century on, after the Renaissance had led to a general secularization of intellectual life. Meanwhile, the contribution of these fourteenth-century scholars had been largely forgotten, and remained hidden until twentieth-century historians of science demonstrated the significance of their work.

The story of Babylonian astronomy is even more extreme. From 750 B.C. on, the "prognosticators" of Babylon formed an entirely isolated and specialized professional guild; indeed, their professional methods and ideas were official secrets, which they were forbidden to reveal to outsiders. Though some of their results eventually reached the Greek world, after the capture of Babylon by Alexander the Great, the full sophistication of their methods was unsuspected until modern archaeologists recovered their records, and the detective-work of twentieth-century scholars deciphered them.[12] Without this rediscovery, Babylonian astronomy would have been destroyed as totally and finally as the institutions of the Babylonian State. Here, a locally successful discipline suffered the fate reserved for isolated but over-specialized "populations" whose original niche has disappeared. And, for all that we know, the lost cultures of Mexico or Cambodia may have had comparable intellectual achievements, which were equally the property of isolated professional guilds, but which were later forgotten as completely as the techniques for producing the stained glass of Chartres Cathedral.

Ideas Did Not Spread to Broader Culture

In such cases as these, the "resonance" between the specialized discipline and the larger public mind is so weak that innovations within the professional guild—however striking in their local effect—woke no echoes in the broader ideas of the culture. By contrast, the fact that science has developed with such vigor and fertility in Western Europe since A.D. 1600 is a consequence, not least, of an active resonance between scientific specialists and the general public, and of the interaction of ideas between the newly emerging special sciences and the wider culture of the time. On the one hand, this resonance has helped to confer dominance on the new scientific ways of thought, by incorporating their outlines into the general world-picture of "common sense"; on the other hand, it has helped to fuel the development of the sciences themselves, by focusing attention on conceptual problems of wider importance, so maintaining a flow both of intellectual innovations and of talented apprentices into the sciences concerned.

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[12] The relevant material has been discussed at length in O. Neugebauer's classic volumes on *Babylonian Mathematical Ephemerides* and summarized conveniently in his more popular account, *The Exact Sciences in Antiquity* (Princeton, 1961).

(iii) Finally, the broader social conditions for maintaining the unity and continuity of a scientific discipline are relevant also to the profession that embodies it. A term like "scholastic" can be applied, not only to a body of concepts and doctrines which is transmitted uncritically on the basis of mere authority, but also—in a more literal sense—to the tradition-bound institutions of the "schools" in which this authoritarian teaching takes place; while the term "anarchic" applies equally to the process of intellectual variation, when uncontrolled by any effective selection procedure, and also to an institutional situation which permits such a proliferation of uncriticized ideas. In each case, the consequences are the same for both discipline and profession; stasis in the former case, loss of definition in the latter.

Corresponding parallels can be found, for instance, where one earlier science gives rise, by fission and specialization, to two or more successor-sciences; or, alternatively, hybridizes with another science. There, disciplinary changes in the patterns of problems and methods are once again associated with professional changes in (e.g.) the institutions and journals of the science. Ecologically, however, it is clear that this relationship between disciplinary and professional changes, however normal and even desirable, is by no means necessary. So, the actual conduct of scientific professions creates still further occasions for self-criticism. At one time, the existing media of publication can be criticized, as failing to meet the actual disciplinary needs of a science; and, at another, the institutional question can now be raised, how far the current professional sub-division of the sciences accurately reflects the real pattern of intellectual problems at the time concerned.

There may (e.g.) be excellent intellectual reasons for making some group of interdisciplinary problems the concern of an independent new sub-discipline; yet influential members of the existing professions may see this as an implied threat to their own interests, and block the establishment of the professional organizations which would give institutional effect to the new sub-discipline. In that case, it can be argued that the institutional arrangements of the existing professions are not "adequate to" the requirements of the new sub-discipline, so that anyone who refuses institutional autonomy to the new professional organizations will be hampering the intellectual development of the science also. Conversely, there have been times when the number of scientific periodicals was deliberately multiplied for commercial reasons, which had no real relevance to the intellectual needs of the disciplines concerned, but simply conferred the trappings of independence on artificial sub-divisions of larger but perfectly coherent disciplines. Here again, the very needs of the science itself provide the basis for evaluation and self-criticism. The question, "Is your journal really necessary?", then means, "Does your journal fulfill an authentic disciplinary need?"; and this question must be answered in the light of the strategic and conceptual problems characteristic of the actual scientific situation.

In this way, the proliferation of periodicals can run ahead of genuine disciplinary needs, just as the conservatism of professional organizations can hold back proper disciplinary development. Either way, the parallels between intellectual and institutional change, while close, are not inevitable. And, either way, the sanctions by which the convergence of disciplinary and professional considerations--of ideas and institutions--is ultimately determined are not those of logical necessity. . . .

Further Comment:

Toulmin's account divides the activities of the professional society, or the "invisible college," into two parts: the political part, which is as subject to human foibles and power madness as any other human political enterprises; and the intellectual part, where the internal act of critiquing present theory is carried ahead in terms of complex criteria related to the "explanatory ambitions" of the professionals in the field (Toulmin does not rely on such general criteria as generalizability, elegance, predictive accuracy as general criteria of the adequacy of a scientific theory).

Further he divides the political activity internal to the profession (e.g., promotion within the profession to positions of "magisterial" scientific authority) and activity external to the profession (e.g., activity developed to enhance the authority, support, communications and position of the profession in relation to the outside world).

The activity of professional societies in the sciences described in this section reflects largely the "political" side of the societies. That is, the "advancement of theory" is never the direct goal or consequence of professional society intervention in elementary and secondary teacher education and curriculum matters, since children and youth are not expected to, or given the equipment to, make real theoretical contributions and rarely ever are allowed to make new applications of a theory. This is probably largely true of most of the interest of the professional societies in undergraduate college coursework also.

The standard ways of working with sciences in the schools is to have the young person apply an old ("already discovered") rule to an already clear instance so as to give the person some confidence that the procedures and explanatory methods of science do work. However, in the case of the schools this reapplication of theory to instance is done without the judicial presence of the "thinking scientist" and without the opportunity for the youth's new observation, rethinking (or whatever) to be generally considered as possibly meaningful–capable of reshaping advanced thinking or contributing to the prestige of the finder in the circles of science. The work of most science teachers in the elementary and secondary schools, and even that of many undergraduate college teachers, is separated from the "thinking scientist's" realm in the same manner.

The argument for professional society intervention in the life of schools and colleges may be (a) that the intervention of professional societies in the life of the schools makes possible an apprenticeship which will guarantee a pool of competent theoreticians; or (b) that it is dangerous for a scientific elite to be in the possession of theory which is not communicated to the masses of mankind through some school version. Seldom, if ever, is there included in the analysis of a popular group, particularly a non-Western or religious group, any consideration of the indigenous science ("concepts" or "paradigms") which the group uses, or of the effects on the group of the compulsory communication of other concepts or paradigms. The guidelines are written without a sense of *audience* and without a sense of the uses and limitations of the magisterial authority of the scientist as theoretician where he has contributed to concept development. These issues are related to the more general question of the limits and proper province of the magisterial influence of particular scientists.

Evolution Perhaps Leads to Revolution

Toulmin's work is in part a reaction to the earlier ideas of T.S. Kuhn, who viewed change in science in terms of a series of revolutions in scientific thought which drastically overthrow older ideas and replace them with new ones, only to be replaced themselves in the same fashion. Kuhn does not clearly define the conditions for such revolutions; they seem to be irrational leaps in an otherwise rational process. Perhaps the truth lies somewhere between Kuhn's *revolution* and Toulmin's *evolution*, on grounds currently being explored by Eric Margolis–perhaps in evolution which leads to conceptual revolutions. Revolutions in thought do occur, but they are the product of an imaginative synthesis of many ideas; they may be cross-disciplinary; they may totally realign disciplinary boundaries; they may even deny the entire disciplinary establishment. "In society, as in nature, evolution (gradual development) leads to revolution (sudden change)" [Margolis, unpublished Study Commission paper]. There is a sense in which everything evolves; yet historical perspective and human consequences define some kinds of change as revolutionary. Change–indeed, progress–for Toulmin is based on whatever "sells," especially to the right people within a discipline, but also in the societal marketplace. However, Margolis observes:

> The existence of professional groups does not indicate either widespread or elite approval (consider, for example, popular opinions of lawyers and the New Committee recommendations on the ABA). Finally, the discipline society itself may engage in activities sufficiently questionable to evoke social rage (for example, the recommendation that "discipline" societies that endeavor to accredit "departments" be subject to anti-trust suits). What is important is that Toulmin recognizes that the creating and dissemination of paradigms and the existence of disciplines is a political decision.
>
> It may be possible to show that science is the product of a certain mode of production in much the same way that a legal system is and it is directed toward the productive ends of that mode; if anything, it is as much constitutive of that reality as it is an "unravelling of the laws of the universe." Thus, the analogies which Toulmin draws between concept-development and "salesmanship" are appropriate, but "salesmanship" contains no warrant that the transaction will be governed by ethical considerations or that what society allows discipline societies to perform as "good" will not be the consequence of the same sorts of

> elite decisions as are other decisions in a politically hierarchical, elitist society.
>
> If decisions about what is to be studied and how they are to be studied are political decisions, how can education or the process of science be transformed so as to serve a less hierarchical, more classless notion of the "social?" . . . It is man's transcendent rationality which holds the potential for disregarding particular conceptual variants which are "adaptive" to a particular reality, but maladaptive to a longer view of human history. The development of the wisdom necessary to reject "bad" concepts which "work" is a necessary part of the development of human understanding (Margolis, pp. 23-24).

Whether or not one accepts Margolis' Marxist perspective, one may ask what is elitist, self-serving and destructive in professional society decisions about the schools and what is genuinely reflective of a desire to make the schools better serve inquiry, act as democratic channels for information, or act as channels which serve the aspirations for freedom of particular cultures which may or may not have their own ethnoscience and ways of organizing to gain knowledge.

Professional societies in the sciences seem to be demanding an increasing role in the decisions about how the disciplines they represent are taught in the schools. In light of the fact that disciplines themselves are being called into question in the face of growing concern over the newly realized "education for life" function of schools, it may be appropriate to scrutinize these activities of professional societies more carefully. Margolis has argued:

> An account of the decision-making process must take into account the totality of possible arguments for and against the adoption of the new concept: a process which by definition cannot be relegated to an elite "discipline" of experts, or indeed any single form of "rationality" or "clear-headedness." In this respect, theological, mystical, political, and psychological arguments must enter the process on the same level with empirical or positivistic criteria. The ensuing debate, then, will take place in the transcendent dimension of potential human consequences. Only by this political process which appeals to "mass persuasion"

> will science be unpacked of its reified and mystifying aspects, so as to be recognizable as a variety of ideology; only then will science "serve the people" instead of existing as an external force pulling us into a future of endless novelty and shock, and forcing man to alter his social existence to keep up with its technological demands. The alienated science of class society has not proceeded "rationally," i.e., in the light of all relevant knowledge; it has proceeded irrationally by limiting the admissable types of knowledge to a single dimension of what is "rational." Toulmin, in denying the possibility of a conceptual or a social revolution, denies the possibility of uniting the two dimensions of wisdom: the dimension of "what is" (implied in the title *Human Understanding*), and the dimension of "what is to be" (Margolis, pp. 27-28).

Whatever one may think of this debate, the materials which follow suggest something about the political structure and intervention in the schools and colleges of the professional societies in the sciences: the American Chemical Society (ACS), the American Institute of Biological Sciences (AIBS), the American Institute of Physics (AIP), and the Mathematical Association of America (MAA). The essay on "The American Miscellaneous Society" suggests how much one can get away with and be "a professional society" in our society. The AIBS chapter suggests how limited the professionalism of professional societies may be when they take on the schools.

AMERICAN CHEMICAL SOCIETY

The American Chemical Society (ACS) is an organization so large and complex that it is difficult to assess what it does to or for undergraduate education or the education of teachers.

With a membership of 110,000, a professional staff of 125, a total office staff of 270, and an annual budget of some $48 million, it can safely be called formidable, rivalling as it does the American Medical Association in organization and influence. It is also impressively comfortable with itself, confident of its mission, and self-aware. Dr. Moses Passer, head of the Department of Educational Activities, pointed out with obvious pride, in a 1971 interview, that ACS was chartered by Congress in 1938: "This is exceptional–very few scholarly societies have this distinction." The "distinction" has resulted in a very professional society. One may ask what the American Chemical Society means by "professional" and how the definition relates to education.

Partly, the society's concern relates to employment and perquisites. Article II, Section 2, of the ACS Constitution (titled "Objects") reads as follows: "To foster the improvement of the qualifications and usefulness of chemists, the SOCIETY shall be concerned with *both the profession of chemistry and its practitioners.*" This section, adopted on July 10, 1972, is reflective of a shift in focus which Dr. Passer, in the same interview cited above, feels has been taking place in the society very recently. He declared that ACS has traditionally been more a "scientific-educational society" than a "professional society." However, more attention is being given lately to the professional aspects of chemistry and chemists, not, he is quick to point out, at the expense of but rather in addition to the "science" and "education" activities. He sees the employment crunch as a factor in this change of emphasis. It is interesting to note, in this context, that occasionally in recent years a petition candidate has won the highest elective office in ACS; petition candidates, who tend to be more "professionally" rather than "educationally" oriented, have generally been competing vigorously with those nominated by the Committee on Nominations and Elections of the Council.

Career Preparation and Employment Important

ACS *is* extremely active on behalf of the professionals it represents with respect to career preparation and employment. However, it also intervenes in undergraduate education. For example, the Committee on Professional Training establishes standards for and accredits (by invitation) undergraduate programs in chemistry. This committee has an annual budget of $65,000, in addition to a $60,000 publication budget which is self-sustaining. (It is puzzling that, after thirty years of ACS involvement in the accreditation business, less than half of the 900 institutions which grant a degree in chemistry are on the ACS approved list.) Several society publications cover the professional spectrum from undergraduate training through graduate education to career placement: "College Chemistry Seniors" is a tabulation of academic records of seniors interested in graduate school. "College Chemistry Faculties" is a directory of all U.S. and Canadian college teachers of chemistry and related fields. "Academic Openings" is a periodic listing of available college teaching positions. However, undergraduate education is by no means the American Chemical Society's prime concern; it spans education and industry in ways which may be of use or interest to Career Education advocates. Only about 20 per cent of the members of ACS are engaged in academic pursuits, these mostly in colleges and universities in both teaching and research positions; a small fraction of this number are secondary school teachers. On the other hand, 70 per cent of the membership is employed by industry. The rest of the members work in government, research institutes, independent consulting, and so forth.

This dispersal of membership may in some measure account for the tone of ACS membership criteria. They appear to be elitist or intensely concerned with "quality control," depending on one's perspective. Membership requirements are quite explicit: A member is a person with at least a bachelor's degree in chemistry, chemical engineering, or a related field from a department on the ACS approved list or a bachelor's degree from a nonapproved department plus three years' career experience in the field; there are other possibilities, but these are minimum standards. An associate member is a person with academic training but without experience or a student who has completed three-fourths of the chemistry curriculum (including 24 semester hours in chemistry). Associates may vote, but they may not hold national office, though they may under certain conditions become local officers. The society structure and membership requirements are, however, currently being re-examined to permit stronger ACS involvement by chemistry-oriented individuals who do not meet current membership requirements, such as chemical technicians from two-year colleges, some high school teachers, chemical executives, and others.

Younger Chemist Task Force Formed

Other recent developments include the formation of a Younger Chemist Task Force and Member Advisory Board which are intended to open new channels for younger chemists to participate and have a voice in ACS activities, and the development of a Women Chemists' Committee, a conservative group composed of professional woman chemists. (Although women have done relatively little to rock the chemical boat—one woman appeared in chains at a recent meeting—a 1970 conference made the following recommendation: "In view of a certain need for more and more kinds of scientists with a solution to the world's social problems, employers of scientists should make specific efforts to employ women.") All of these changes in membership criteria suggest the possibility of a shift in the *ethos* of the ACS and a serious re-examination of its intervention in undergraduate education and the education of teachers.

Some of the ACS concern for undergraduates is built into its constitution. The by-laws also provide for establishment of chapters of student affiliates of the society at two- and four-year colleges and universities, as well as for corporation associates of the society who wish to support the program of the society, particularly with respect to its publications which are not self-supporting. However, neither student affiliates nor corporation associates have any membership privileges.

The ACS, for all of its elitism, is more democratic than many professional societies. Membership had been increasing in ACS until 1970; since that time it has shown a decrease of about 1½ to 2 per cent per year, probably a reflection of the economic situation. However, since 1969 voting participation in society elections rose from 34 per cent to 40 per cent. The organization is governed by a council consisting of 400 members who directly represent the society's 175 local sections and 27 divisions. Each division has two representatives on the council, and each local section has representation in proportion to its enrollment. This council acts as an advisory body in matters pertaining to general management of ACS; it meets twice a year. One of the major committees of the council is the committee on nominations and elections. This committee is composed of 15 voting councilors elected in such a manner as to provide rotation; it draws up a slate of two nominations for each office. Any 150 members, not more than one third of whom are identified with any local section, can submit additional nominations for office, subject to certain procedural rules laid out in the by-laws. The fact that petition candidates have been so successful recently, under the circumstances, attests to the activism of ACS membership. Officers are elected by the membership-at-large. In addition to the council, there is a board of directors which, in addition to its other duties, selects a treasurer and an executive director for the society and also determines policy under which the executive director operates. The executive director is responsible for appointing search committees for journal editors; the recommendations of such committees are subject to board approval. Thus, while journal editors can be seen as part of what Toulmin has called the gerontocracy, the actual process for selection of journal editors is not entirely undemocratic. ACS has the largest budget of any of the societies considered in this study. *Chemical Abstracts,* which has been called the life-blood of the chemical professions, is probably the most successful professional journal, in terms of being self-supporting at an annual budget of $25 million (although, to be perfectly accurate, it should be mentioned that *Chemical Abstracts* received a million and a half dollars in grants from the National Science Foundation in 1971). In fact, in this society, publications bring in the largest share of the budget–about 50 per cent in 1971. On the other hand, dues net the society a mere 7.5 per cent of its budget, even though members and associates pay $25 and students half that sum. Nearly twice as much, or about 14 per cent in 1971, are grant funds, which compute in the millions. Various chemical science information services received over $1.75 million in 1970 and another million plus in 1971. There have been the usual NSF grants for a national register and a visiting scientist program. It is interesting that NSF has also supported the Chem. Tech. program (see below), the 1970 conference, and the updating and reprinting of teacher aids and film lists prepared by the society. Thus, the ACS budget seems to be distributed among "theory making" and "theory applying" activities on the one hand and, on the other hand, activities connected with the politics of the profession and its relation to the world of education and to the great world. The greatest emphasis seems to be on the work of "theory making" and "theory applying."

ACS States Many Objectives

This does not mean that the ACS has no concern for education and the great world. ACS states its objectives in this fashion in its constitution: ". . . to encourage in the broadest and most liberal manner the advancement of chemistry in all its branches; the promotion of research in chemical science and industry; the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education, and attainments; the increase and diffusion of chemical knowledge; and by its meetings, professional contacts, reports, papers, discussions, and publications, to promote scientific interests and inquiry, thereby fostering public welfare and education, aiding the development of our country's industries, and adding to the material prosperity and happiness of our people." This discussion cannot hope to be exhaustive in discussing the activities of the society which bear on these goals, but to begin: The Chemistry and Public Affairs Committee and staff office direct their major efforts toward the preparation of carefully researched, well documented high quality reports on problems involving chemistry and public affairs, such as the environment. This same committee administers Project Seed, an ACS program to provide education and employment aid to the disadvantaged in our society.

In its more directly educational activities, ACS through its staff Department of Educational Activities works with a "broad range of programs at all levels" (Dr. Passer), particularly with the reform of undergraduate chemistry programs, two-year programs and teaching. Educational Activities has a staff of 18, an annual budget from ACS of $200,000, and a self-sustaining, continuing education program with an additional budget of $300,000. The Division of Chemical Education has 3,400 members who have produced a "broad spectrum of programs with particular emphasis on the college level" (Dr. Passer). This division publishes the *Journal of Chemical Education* for 30,000 subscribers; it is also responsible for the National Chemistry Examination Program. The society has also developed guidelines and a complete curriculum for a two-year college chemistry program. It has provided the initial impetus for the development (with NSF funding) of two new curricula –CBA and CHEM Study (Chem Study is used today in about one third of all U.S. high schools, CBA in another 10 per cent.) Another NSF grant of $621,000 in 1970 provided funds for the development of Chem. Tech., a program designed to produce chemical technicians to meet the expanding employment needs of industry for non-degree chemists. ACS is considering the development of guidelines for chemistry education, including the physics component of such a curriculum, for secondary schools. The society has submitted a proposal for an NSF grant to develop a high school curriculum for people not interested in going on to become professional chemists. And ACS members contributed to studies ending in the 1971 AAAS-NASDTEC Guidelines for Preparation Programs of Teachers of Secondary School Science and Mathematics.

ACS Sponso[illegible] Conference on Education and Chemi[illegible]

One may summarize the positive side of ACS's concern for education by mentioning the ACS-sponsored Conference on Education in Chemistry in 1970, the aim of which was to seek to improve course content in college and university level chemistry. The recommendations of that conference included such concerns as that: (1) the education committee must make major efforts in curriculum development and teacher training; (2) chemistry departments in the college or university must broaden their curriculum to include efforts to make chemistry students aware of the chemist's role in society and to sensitize them to society's needs; (3) the university graduate schools should aid in the development of more flexible graduate programs and should play a more explicit role in society's problems; (4) the complex, many-headed system of adult education should give particular attention to the broadening of appreciation of chemists, chemical engineers, and other scientists serving the needs of society. ACS—because it bridges society, industry and education —should perhaps also have a major role in the development aspect of Career Education.

On the negative side, one may mention that (a) the ACS practice of accrediting departments appears to be wholly without justification (the Newman Committee in one of its drafts suggested that the process be tested by appeal to anti-trust legislation), productive of inter-institutional homogenization, and restrictive of local autonomy (however, ACS accreditation practice has loosened up considerably since some "big name" schools in chemistry chose not to give their graduates ACS-approved program certificates); (b) ACS curricula for the secondary schools have not been notably more imaginative or meaningful than curricula in other scientific areas developed by professionals, and one can only hope that the fruits of ACS collaboration with NASDTEC will be more attentive to *audiences* and factors in human learning than have previous professional society-NASDTEC efforts and previous professional society curricular efforts; (c) at least one research study has shown chemistry teacher-student relations in colleges at the graduate level to be more hierarchical, less intellectually free, less given to free-flowing back-and-forth theoretical discussion than that of physicists, a matter which the researcher relates to chemistry's intellectual paradigm.[1]

Addendum

In October, 1974, the American Chemical Society was dropped from the U.S. Commission of Education's list of nationally recognized accrediting agencies. The society had been an officially recognized accrediting agency for over twenty years. USOE's reasons for dropping the American Chemical Society were:

1. Many institutions were accredited without site visits; 61 of 141 institutions accredited between 1968 and 1972 were accredited without so much as a visit.

2. Only eighteen of the many institutions "reaccredited" were visited in the period 1968-1972.

3. When a visit was made, one man usually made it and in one day.

USOE also faulted ACS for:

1. Failing to require institutional self studies as part of ACS accrediting;

2. Allowing consultants to some departments also to judge the departments as site visitors;

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[1] Ganice Beyer Lodahl and Gerald Gordon, "The Structure of Scientific Fields and the Functioning of University Graduate Departments," *American Sociological Review*, 38 (1972), pp. 57-72.

3. Failing to develop careful procedures and governance;

4. Failing to show that "accreditation" had any purpose other than procuring members for the chemical society.

Apparently USOE did not see ACS accrediting as a meaningful educational or voluntary process or one which met USOE's educational and eligibility purposes in preparing the commissioner's list of nationally recognized accrediting organizations. It seems probable that other professional societies and educational groups seeking to "accredit" institutions of higher education could be faulted on similar grounds (Cf. *Study Commission Final Report*, its discussion of NCATE, in press).

AMERICAN INSTITUTE OF PHYSICS

The structure of the American Institute of Physics is similar to that of other umbrella organizations such as the American Institute of Biological Sciences. It is composed of eight member societies with a total of about 50,000 members, about 4,500 of whom are students. Of these eight societies, the American Physical Society, with 29,000 members, and the American Association of Physics Teachers, with 12,500 members, contain the most physicists. The proportion of Ph.D.'s is highest in the American Physical Society; and the American Association of Physics can Physical Society which seems closest to the traditional learned society of any of the member societies, is limited to those professionally involved in physics as teachers, researchers, or students. The American Institute of Physics has 100 corporate associate members, whose dues are based on the number of physicists they employ. With its capacity to accommodate a diverse membership, the American Institute of Physics seems about as democratic a professional organization as one is likely to find.[1]

Like the American Institute of Biological Sciences, the American Institute of Physics has a somewhat cumbersome bureaucracy, which may work against its developing very democratic educational ideals. The Governing Board is AIP's representative assembly, consisting of "membership-at-large" and members representing the individual societies. The chairman of the Governing Board is elected by the members of the Board; the executive director, the journal editors, and the staff officers are appointed by the Board; the Nominating Committee is appointed by the Chairman of the Governing Board. Amendments to the Constitution are proposed and approved by the Governing Board and ratified by the member societies. The member societies have their own more or less complicated mechanisms for distributing authority and effecting change within their own structures.

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[1] AIP is unusual among the most prominent professional societies in that its executive offices are located in New York rather than in Washington, D.C. This is an accident of history. AIP was founded in 1931 as a federation of professional societies in physics to alleviate the financial crisis in the publications programs of the individual societies. It was offered, and accepted, financial support and office space by the Chemical Foundation, which is located in New York City; and since three of the founding officers were New York State residents as well, it has continued to occupy offices there.

Though some research has shown teacher-student relations in physics to be freer and less hierarchical than those in chemistry, the physicists do not appear to demand very much direct democracy of their professional organization. And, in fact, direct democracy may not be necessary to AIP, for it, like its biological counterpart, does not find its chief source of financial support in membership dues, which, in 1970, supplied only 15.8 per cent of the total budget of $4,897,612. (Individual members pay no dues in AIP, although there is a graded scale for corporate associates. In APS fellows and members pay $20, students pay $10. In AAPT members pay $15, junior members pay $8.) By far the largest share of AIP's support came from the publication program, which supplied more than half of the total budget.[2] Grants and gifts amounted to about $1 million or about 17.8 per cent of the budget. In 1971, NSF grants brought in over $1.5 million. Without its publications and the government, AIP would not have much to go on. Nevertheless, when asked about their activities in the halls of Congress, AIP spokesmen replied that, apart from a Public Responsibilities Committee and some Congressional testimony, there were "virtually none–as a matter of policy."

The expressed purpose of the American Institute of Physics, stated in its Constitution, is the "advancement and diffusion of the knowledge and application of physics." Wholly theoretical in orientation, APS leaves out of its purpose the "application." However, AAPT proposes to work for the "advancement of the teaching of physics and the furtherance and appreciation of the role of physics in our culture." The document does not define what "our culture" is–whether, for example, third world people are included or groups which have not developed a western version of the disciplines of physics.

How have the millions of dollars in grant monies served AAPT's constitutional purposes? Partly through the development of services intended to improve undergraduate education or undergraduate and graduate education

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[2] AIP and its affiliates publish 35 archival journals in physics and astronomy. There has been increasingly heavy use of typewriter composition of journals and a shift from letter press to offset printing to lower costs of production and shorten publication time.

education jointly. By far the greatest part of the money received from NSF in 1970 and 1971 was applied to the development and improvement of a national physics information service. Small amounts each year went to the support of a visiting scientist program, a national register, and an undergraduate consultant program in physics. NSF even provided $48,600 in 1971 for a study of the teaching of physics at the pre-college level. The money was not much but the intention was laudable.

At the undergraduate level, the Consultants Program was developed for the purpose of advising (mainly) college physics departments on curriculum planning. The Information Pool in Education, which supplements the Consultants Program and also received part of its support from NSF, is a library of reports, journals, computer programs, and catalogs for undergraduates.

Students are not left out. AIP sponsors a Society of Physics Students which has 5,000 members in 450 institutions and has developed its own undergraduate research program. The Tech Physics Program, still another NSF project, is a training program for technicians in physics, similar to BIOTECH, which has produced materials in modular format for use in teaching prospective technicians. Finally, there is a program in manpower development and training. Like their colleagues in the biological sciences, the physicists appear to be limiting themselves to information distribution and consulting in the educational sphere and avoiding the pitfalls of accreditation.

It is not clear that the American Institute of Physics has ever had or sought to have very much influence on undergraduate or graduate physics. The most active group in the area of physics education in recent years has been the Commission on College Physics. In 1967 CCP indicated that it "believed the shortage of qualified high school physics teachers [to be] *the most pressing problem* facing American physics today because its solution is central to the future vitality of our profession." It, in turn, developed guidelines for those college departments that wished to improve their teacher education programs and produced a short book, *Preparing High School Physics Teachers*, which documents the need for better trained high school physics teachers, outlines characteristics of successful teacher preparation programs, proposes a model program ("one that has numerous exit, entry, and crossover points to the world of research"), describes a few existing large teacher training programs, and suggests techniques for recruiting good teachers.

While the CCP program was going on, NSF was simultaneously developing institutes, supporting the Physical Science Study Curriculum and Harvard physics courses (new secondary curricula), developing the physics components of the Cooperative College-School Science Programs in Missouri and Illinois which were to use college-school interaction regionally to improve the physics program of an entire school system, and supporting the UPSTEP program to improve the totality of a higher education institution's physics program for educating teachers.

AIP got into the business of curriculum and teacher training only very late in the day, assigning one staff member in 1968 to "determine issues," such as "lack of teaching materials and learning opportunities for the slow learning student." But the AIP budget for educational improvement has been miniscule since 1968, and the Conference on College Physics went out of business in 1971. One AIP subsidiary, the American Association of Physics Teachers (AAPT), has taken over, to some degree, from CCP and the early AIP work by setting up a Council on Physics in Education to develop better curricula and teacher training in physics and related areas. For instance, a committee has recently been formed to plan and conduct a workshop on intellectual development at the AAPT annual meeting on January 27-30 in Anaheim, California. The goal of the workshop is to make teachers of high school and college physics aware of the work of Jean Piaget and others concerning the thinking strategies used by many high school and college students.

The Council on Physics in Education continues its work with a four-man executive committee and twelve other members, acting as an "advisory" to AAPT, reviewing proposals and action agendas. It includes in its subcommittee structure committees on pre-college education, two-year college work, and higher education work. The committee on pre-college work has been quite inactive, according to Dr. Dion Shea, of the AIP Education Division, not having found a role for itself, and, in general the AAPT committee structure has functioned somewhat erratically with a miniscule budget. Dr. Shea indicated that the *"securing of qualified high school teachers of physics is still one of the most pressing problems of the physics profession"* but suggested that AIP had little money and little power (beyond exhortative power) to handle such problems. The National Science Foundation and other federal agencies have almost no budget for improving physics teaching, and the most encouraging things going on are going on at local higher education institutions such as Austin Peay in Tennessee where high school teachers can use a hot line to tap the intellectual resources of its excellent teaching staff immediately when a teaching problem arises.

Given AIP's total budget, the Council on College Physics' 1968 announcement that teacher recruitment and education is the principal problem of the profession, and the limited funding and effort which has gone into this area since 1968, AIP can hardly be said to have done much about the greatest problem of the profession. However, if it has not done much good, at least it cannot have done much damage either, since it has dedicated so little of its resources to concern for physics in the schools.

Before we conclude this section, it may be useful to consider what the Commission on College Physics said about undergraduate physics education before it closed down. Prior to turning over its responsibilities to the Council on Physics in Education, the Commission published an NSF-funded study called "Priorities for Undergraduate Physics Education." This study grew out of the manpower glut being felt across the board in higher education and the feeling that the drying up of funds would lead to conservatism and a stifling of innovation in physics education. CCP found itself to be the *only* organization in physics chiefly interested in changing the approach to physics teaching, with a view toward attracting non-specialist students to the study of physics to keep the discipline alive in the schools. It had become clear that, now that students were being given a choice, they were not opting for science courses. The questions the commission faced were how to make physics relevant or responsive to today's concerns, how to encourage teachers of physics to sacrifice some of their research and discipline orientation in favor of a more student- and topic-centered approach, how to justify the increasingly and disproportionately higher costs of physics education. The final recommendations (summarized below) of "Priorities" fell into two general categories: the professional responsibility of physicists must be greatly broadened to include an emphasis on the education of people rather than just the education of physicists; the physics profession must be prepared to innovate and improve, to evaluate and to reward in these broader areas of responsibility.

1. Priorities . . . for Individual Physicists and Departments of Physics

    a. Departments should redesign their educational programs so as to reach a substantial and representative fraction of their college or university community.

b. Evaluation of professional contributions to physics and to the community should bear real and visible weight in departmental decisions on tenure and promotion. [Schools should reward such activities as development of new courses, interdisciplinary efforts, activity as resource person for community.]

c. Individual faculty should treat their educational activity as a professional responsibility.

d. Departments and individual faculty should accept responsibility for the improvement of their educational product.

e. Departments must provide the mechanisms and individual faculty must accept the responsibility for providing supervision, instruction and evaluation for teaching assistants and for the in-depth teaching experience and opportunities for professional development of prospective college teachers.

f. As a general responsibility, departments must acknowledge and alleviate the problems that arise from a static, aging faculty, the decreased opportunities for engaging in the traditional practice of physics at all levels, and the present critical situation faced by graduate students and nontenured faculty.

2. Priorities . . . for Professional Societies

a. The AAPT should provide leadership for the desired broadening of physics education which will make the physics major more versatile.

b. . . . AIP, through its division of education and manpower, retain an active role in physics education. [The Conference] deplored the present reduction of support for that division and urged that the member societies be asked to contribute such additional and earmarked funds as necessary to reestablish the division's important activities.

The Conference also urged that the professional societies "design and institute the plan for faculty exchange . . . increase articulation with the two-year colleges . . . support a newsletter to fill the void left by the demise of the CCP and AIP-DEM newsletters.

3. Priorities . . . for Funding Agencies . . .

   a. The NSF and other agencies should be prepared to support physicists undertaking experimentation in instruction in the same manner as it supports those engaged in fundamental research.

   b. Ways of achieving closer cooperation between publishers and other suppliers of commercial materials and the physics teaching community should be explored.

4. Priorities . . . for Academic Administrators: . . . administrators have the responsibility to be the revolutionaries; they have the power to make basic changes in structure and function . . . administrators must begin to lay their plans for the thoroughgoing changes necessary to permit the survival of their institutions in the coming period of great financial, social and political pressures. These changes might include restructuring of the organization of departments into other arrangements, and the restructuring of the formats of instruction.

   a. Administrators should dedicate a designated percentage of their institution's budget to educational research and improvement. These funds should be available to faculty members in the various disciplines to encourage their creative contributions to its presentation to students and the community.

   b. Administrators should provide leadership in designing the procedures to insure that effective teaching and creative educational innovations are rewarded [with tenure, promotion, salary increases and grants, staff assistance]. Components of such procedures should include student evaluation of teachers and instruction. . . . Encourage teachers (including TA's) to pay some systematic attention to improving their teaching. This should mean that specific, budgeted programs are instituted to provide teachers with resources and assistance in improving their teaching.

c. Extra-departmental interactions should be encouraged.[3]

Few of the priorities set forth in the early 70's have been taken seriously by the government or the profession in the years since. The recommendations of the Commission on College Physics make sense as directions for undergraduate education in physics and for improving school physics education. They have not, in the main, been followed.

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[3] The same issue (the last issue) of the CCP *Newsletter* which reported on the CCP Conference on Priorities also summarized the results of a "symposium on the Education of Physicists" sponsored in June, 1971, by the Batelle Memorial Institute. The participants in this conference represented only the most prestigious physics departments and the concerns of the conference were solely with the major undergraduate and graduate programs in physics; the conclusions are all the more surprising because of this. Apart from a list of suggested topics for new courses were these suggestions for general improvement of the present system:

1. Suggestions for faculty level changes

    a. Make funds available and accessible to younger faculty members for the creation of new courses and for experimentation in education.

    b. Increase the respect for teaching by recognizing it as one of the scholarly activities practiced by good physicists and by creating additional prizes for good teaching at all levels.

    c. Make tenure faculty appointments so that there is more emphasis on teaching–possibly, in some cases, at the expense of research.

    d. Develop systematic ways to evaluate the teaching of faculty members through input from the students.

    e. Involve the students in the input to the decision making which goes into the selection of courses and the granting of tenure.

    f. Increase the opportunities for horizontal movement so that faculty members who find they are not interested in research or teaching can concentrate on other things or find another job.

Other suggestions include seminars in teaching techniques, post-doctoral fellowships for innovative teaching, information exchange about radical teaching methods and materials, appointment of visiting professors who are distinguished teachers, liaison with pre-college physics education.

THE MATHEMATICAL ASSOCIATION OF AMERICA

The appearance of two or more professional societies in a single discipline area is one of the symptoms in American education of the development of distinguished and divided worlds–the one being the world of formulating theory, conducting research, and advancing the science and the other, the world of transmitting theory, developing its pedagogy, and determining policy for undergraduate and, to some degree, elementary-secondary schooling. In mathematics this disjunction has resulted in the formation of the American Mathematics Society (AMS), the theory group, and the Mathematical Association of America (MAA), the "real world" group. (The same split is replicated in English in the Modern Language Association and the National Council of Teachers of English.) The discontinuity is not complete, of course. The AMS theoreticians debated and acted upon resolutions on the Vietnam War and [illegible] matters of "political interest," and the Mathematical Association of America includes in its ranks many distinguished theoreticians and has debated questions that touch on advanced theory.

The organization into two societies may permit those mathematicians who wish to be bothered less with public issues bearing on their own expertise to avoid them. One mathematician has remarked, to the Study Commission, that few mathematicians would regard "the Mathematical Association of America as the most influential of the mathematics societies," thereby suggesting that the hearts of university mathematicians are in theory-making, advanced research work, and advanced graduate work (beyond the comprehensive). (It should be observed that the MAA is not out of communication with the AMS. Many AMS members are also members of the MAA, and the AMS usually has a delegate-member on the board of directors of the MAA.) The Mathematical Association of America, on the other hand, has been characterized as the society for those interested in heuristics, pedagogy, and educational policy in the U.S. It may be useful to try to see what such a society does.

The object of the MAA, according to its By-Laws, is "to assist in promoting the interests of mathematics in America, especially in the collegiate field, by holding meetings in any part of the United States or Canada for the presentation and discussion of mathematical papers, by the publication of investigations for the purpose of improving the teaching of mathematics, and by cooperating with other organizations whenever this may be desirable for attaining these or other similar objects."[1] MAA has blanketed the teaching field with an impressive array of guidelines, standards, qualifications, and recommendations that reach into the curriculum and the training of teachers for every level of education in mathematics from the elementary school to doctoral programs and in such related fields as physics and engineering.[2]

The MAA is superficially a very democratic institution. It has 18,500 individual and 300 academic and corporate members, and the only membership qualification is interest in the field of collegiate mathematics. However, membership applications must be endorsed by other members. Dues are $12.50 per year, plus a $4 initiation fee which is waived for students and members of NCTM. MAA is somewhat unusual for such a large group in that it has no representative assembly. Officers are elected by the membership-at-large; journal editors and the Executive Director are elected by the Board of Directors. A Nominating Committee, appointed by the President with the approval of the Board, is responsible for nominating officers, as well as conducting a primary and a final election. On the financial level, the organization is more democratic than most in the sciences. In 1969 MAA operated—in the red—on a budget of $358,940, 44 per cent of which came from dues, 45 per cent from publications, and the rest from grants.

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[1] Among the publications produced and distributed by MAA are the following: *Guidebook to Departments in the Mathematical Sciences in the United States and Canada* (which lists faculty, library facilities, and undergraduate and graduate curriculum for all colleges and universities with a mathematics program), *Professional Opportunities in Mathematics,* and *A Combined Membership List* (including MAA, AMS, and the Society for Industrial and Applied Mathematics). The Mathematical Sciences Employment Register is a service to mathematicians and those seeking to employ mathematicians provided jointly by MAA, AMS, and SIAM; it has its own publication list which includes a *List of Positions,* a *List of Applicants for Positions,* and a *List of Retired Mathematicians Available for Employment.* For those who feel such things are an important index to the degree of professional involvement of a discipline-oriented society, MAA does sponsor a group insurance program for its members. Other services to members include such publications as *American Mathematical Monthly, Mathematics Magazine, Carus Mathematical Monographs* (a sort of *Cliff's Notes* of mathematics), and *MAA Studies in Mathematics* (a journal of recent developments in the mathematical sciences), as well as numerous meetings, symposia, summer institutes, and seminars, frequently supported by NSF funds, in various areas of pure and applied mathematics.

[2] *Recommendations on Course Content for the Training of Teachers of Mathematics* (revised, 1971), *Qualifications for a College Faculty in Mathematics* (1967), *A Beginning Graduate Program in Mathematics for Prospective Teachers of Undergraduates* (1969), *A General Curriculum in Mathematics for Colleges* (1965), *Recommendations on the Undergraduate Mathematics Program for Engineers and Physicists* (revised, 1967), *Preparation for Graduate Study in Mathematics* (1965), *Tentative Recommendations for the Undergraduate Mathematics Program of Students in the Biological, Management, and Social Sciences* (1964), *A Curriculum in Applied Mathematics* (1966), *Mathematical Engineering: A Five-Year Program* (1966), *A Transfer Curriculum in Mathematics for Two-Year Colleges* (1969), *Qualifications for Teaching University Parallel Mathematics Courses in Two-Year Colleges* (1969), *Recommendations for the Undergraduate Mathematics Program for Students in the Life Sciences* (1970), *Recommendations for an Undergraduate Program in Computational Mathematics* (1971), *Preparation for Graduate Work in Statistics* (1971), *Maintaining Mathematics Momentum* (Newsletter No. 5, 1970), *The Beginning Teacher of College Mathematics* (Newsletter No. 6, 1970).

The primary impact of the MAA on the reform of the schools has probably been through its indirect role in the creation of the School Mathematics Study Group (SMSG) on mathematics curriculum materials and its follow-up on the SMSG work in film and teacher education areas. SMSG originated with professional discontent with the mathematics curricula of the 50's, with the College Entrance Examination Board's *Commission on Mathematics*' 1959 report on the antiquated state of the mathematics curriculum in the public schools, and with two closely related February, 1958, NSF meetings with mathematicians, the first concerned with the "crisis" in the recruitment of doctoral and post-doctoral mathematicians (attributed to imperfect school curricula), and the second concerned with following up the first by taking initial steps toward reforming mathematics curricula in the schools. The first conference asked the MAA and the AMS to establish a committee to "seek funds from a suitable source and proceed toward a solution of the problem," and the second told MAA and AMS to solve the problem by creating a committee to write model curricula and other materials for secondary school students. AMS had to ballot to determine whether it could indulge in such real world concerns and participate with MAA and the National Council of Teachers of Mathematics (NCTM) in the appointment of a "Committee of Eight" which was to form the launching organization for the SMSG. After giving its blessing to the Committee of Eight, AMS essentially withdrew from the scene. The MAA, however, continued to be somewhat more involved by co-sponsoring, with SMSG and NCTM, a mathematics film center for training teachers (1962) and by following up SMSG (and other "new math" materials) with efforts to reform the undergraduate teacher education curriculum.

Of late, the SMSG materials and other 60's "new math" materials have come under fire for being too "verbal," too theoretical, too "mathematical," and too difficult. The criticism that they depended too heavily on work with symbols rather than on the concrete substances is probably cogent, as is also the criticism, derived from the work of Piaget and the Bourbaki School, that work in geometry should begin for most children with topological geometry rather than with Euclid. Materials more recent than those of SMSG are reflecting, to some degree, this psychological work.

In any case, SMSG materials and others developed in the mathematics reform movement formed the basis for work on criteria for teacher education in mathematics by the Committee on Undergraduate Programs in Mathematics (CUPM), an MAA subsidiary.[3] CUPM has described basically the following program as the "imprimatured" procedure:

> *Level I.* Teachers of grades K through 6.
>
> A 12 semester-hour integrated sequence of four courses covering the development of number systems, algebra, geometry, probability, statistics, functions, mathematical systems and the role of deductive and inductive reasoning. Prerequisite: Two years of high school mathematics that includes elementary algebra and geometry. Two sets of suggested course guides for the sequence will be published.
>
> Some teachers in each elementary school should have Level II-E preparation.

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[3] The Committee on the Undergraduate Programs in Mathematics publishes a *Basic Library List* and *Basic Library List for Two-Year Colleges* to assist schools in providing adequate resource facilities to support their mathematics programs. It has developed a preliminary draft of recommendations for the course content for teacher training courses in mathematics. The Panel on Teacher Training, the Panel on College Teacher Preparation, and the Panel on Mathematics in Two-Year Colleges do the major portion of the work of CUPM.

Level II-E. Specialist teachers of elementary school mathematics, coordinators of elementary school mathematics, and teachers of middle school or junior high school mathematics (roughly grades 5 through 8).

The four courses of the Level I program, plus one course in calculus, two in algebra, a year course in probability and statistics, experience with applications of computing, and one additional elective course (calculus, geometry, or computing recommended).

Level II-J. Teachers of junior high school mathematics.

Review of the contents of courses 1 and 2 of the Level I program, two courses in calculus, two courses in algebra, one course in geometry, a year course in probability and statistics, experience with applications of computing, and two additional elective courses (analysis, algebra, computing, or geometry recommended).

Level III. Teachers of high school mathematics (grades 7 through 12).

Three courses in calculus, one course in real analysis, two courses in algebra, a year course in probability and statistics, two courses in geometry, experience with applications of computing, one course in applications.

The course guides will include descriptions of a course in Euclidean geometry and a course in geometry having a strong link with algebra.

Interestingly, the prescribed program does not appear to include work in the psychology of the acquisition of mathematical concepts by children and youth such as that carried ahead by the Piaget-Bourbaki school. One professor of mathematics has also criticized the guidelines for ignoring the world in which mathematical concepts most vividly come into play, the world of science:

> At present the knowledge of mathematics which these teachers (elementary and high school mathematics teachers) possess is often inadequate; nor are they required to know anything about the uses and cultural reaches of mathematics. In particular, they know no science. Clearly such teachers are not

> prepared to teach a liberal arts course in mathematics, to motivate mathematics through nonmathematical problems or to apply mathematics. . . . They are unable to show how mathematics is important, and so their attempts to convince students lack conviction. Students can see through hollow assurances.
>
> Other forces also operate against the possibility of training teachers properly. The Committee on the Undergraduate Program in Mathematics (CUPM), a committee of the Mathematical Association of America, has prepared a *Course Guide for the Training of Junior High and High School Teachers of Mathematics.* The college courses recommended for this training are analytical geometry and calculus, abstract algebra, linear algebra, geometry, probability and statistics, logic and sets. There was not even the suggestion, much less a requirement, that these prospective teachers should study science. . . .
>
> The training of good teachers is far more important than any curriculum. Such teachers can do wonders with any curriculum (Morris Kline, *Why Johnny Can't Add,* pp. 169-70).

It seems probable that professional society and departmental considerations entered into this failure to associate the study of mathematical languages with the worlds whereof they speak to most people.

Nothing in the accreditation structure counters this movement toward disembodied study. The NCATE evaluations which we have examined, where they comment on the specific mathematics program of an institution of higher education, are likely to say some such thing as "follows guidelines of CUPM of MAA" without further analysis of the *appropriateness at the particular institution of following such guidelines.* NCATE controls national accreditation.

State accreditation (program approval) is strongly influenced by guidelines of the National Association of State Directors of Teacher Education and Certification (NASDTEC), which in the case of mathematics were formulated by a joint effort of the American Association for the Advancement of Science (of which MAA is a member) and NASDTEC. Not surprisingly, the 1971 NASDTEC guidelines for the education of teachers are not unlike the

MAA guidelines though they do contain a useful encouragement to institutions to look at the "historical relationships of mathematics to the culture in which it existed or exists," a standard which the SCUEET informal survey indicates to be mostly honored in the breach. Thus, the MAA has a powerful influence on the schools though it is not the primary elementary-secondary math teachers' organization; that organization is the National Council of Teachers of Math.

In a serious plea made in 1971 for cooperation between the various organizations which represent mathematicians in this country, Gail S. Young, retiring president of MAA, cited "important problems that no one organization can cope with." Among the problems too big for any one group to handle, Professor Young listed the following: (1) the need for a national information system for the mathematical sciences; (2) an anti-intellectual assault on school mathematics (represented by "a number of private corporations that are making deals with school boards to take over certain parts of the teaching of mathematics on a basis of guaranteeing an improvement in scores on standard objective tests of mathematics skills . . . the teaching in these programs by and large takes out all the intellectual content and replaces it by mechanical drill"); (3) the fact that "decisions are made all the time in Congress and in the granting agencies concerning the mathematical sciences without proper consultation with us. . . . I am not talking here about lobbying for our selfish interests. We have a responsibility to the country for the proper development of the mathematical sciences, and we are abdicating that responsibility if we permit important decisions concerning us to be made while we stand passively by;" (4) duplication of mechanical effort in publishing, data processing, and so forth; (5) current serious social crises ("One reason for the existence of such [social] problems is the fact that we do not have enough scientists to go around, and society, so far, has been unwilling to pay for the necessary number of scientists"); (6) the employment crisis, one solution to which might be the production and staffing of an adequate number of computers to take care of the real present and future needs of society. Professor Young feels some progress might be made in some of these areas if there were a single body with some claim to speak for the mathematical sciences, such as the Conference Board of Mathematical Sciences. MAA has passed and begun to implement the following resolution: "endorsement of the continued existence of CBMS; specific criticisms of the current form of organization; detailed suggestions for improvement of the structure; and a directive for MAA to sponsor a meeting of the Conference Board organizations, to discuss the purposes of CBMS and to take measures leading to its improvement."

Though MAA "controls" school math through the accreditation and program approval structures of NCATE and NASDTEC, it does not itself accredit. In 1968, the Board of Governors of MAA asked CUPM to study the question of accreditation and certification. CUPM submitted the report of its Panel on College Teacher Preparation to the Board in the Fall of 1969. The report contained no specific recommendation on the question; but it did state that "a decision to attempt some such program should be made only after the mathematics community as a whole has been given ample opportunity to consider the matter and express its views, and only after general support within the community . . . is clearly assured." Accordingly, in 1970 the Board created an Ad Hoc Committee to Consider Accreditation and Certification in Mathematics to inform the mathematics community about the contents of the CUPM report, to gather the views of the members, and to make recommendations to the Board. No provision was made for polling non-members of MAA, who, presumably, belong to the "mathematics community as a whole." Under the procedures adopted by this committee, most members who attended the 1970-1971 section meetings of the Association, and some others, had an opportunity to comment on the question. The conclusion of the ad hoc committee was that most members were ambivalent to accreditation and certification and that those who were not were opposed. Those who did express qualified support for accreditation and/or certification believed that such measures would improve programs, assist administrators in evaluating applicants, assure adequate preparation for various activities, and pressure weak departments to improve. Those who opposed the measures felt that the cost was not justified by the potential effects, that adequate evaluative criteria would be too difficult to design, that curricula would become rigid and experimentation would be discouraged, and that they found the necessary bureaucratic machinery distasteful and could not trust its effectiveness. Responses were obtained from only about 6 per cent of the members of MAA; replies ran two to one against accreditation and three to one against certification. In the light of this response, it was suggested that a broader, slightly modified use of the Consultants Bureau might be a suitable alternative to formal accreditation. Or, the MAA might assist existing accreditating agencies by preparing guidelines for departmental and program evaluation for use by NCATE, by regional commissions for general accreditation of institutions, and by individual departments for self-evaluation. This idea was supported by the ad hoc committee and by the members responding, who generally agreed that the trend toward excellence in mathematics education should continue and be strengthened. The final recommendations of the committee were as follows:

> 1. We recommend that the Association take no action toward establishing a system of accreditation or certification in mathematics at this time. Whatever advantages or disadvantages such a system may have in the abstract, we believe that MAA members have been given ample opportunity to consider the matter and to express their views, that *general support for the idea has not been assured, and that there is some evidence of strong opposition.*
>
> Acceptance of this recommendation would not preclude reopening the issue under *significantly altered circumstances.* (italics mine)
>
> 2. We recommend that the Board of Governors request the President to appoint a committee to study the future role of the Consultants Bureau as a continuing MAA agency for encouraging and assisting professional development and improving mathematics instruction in colleges. The relation of the role of a Consultant with that of a Visiting Lecturer should be considered, and thought should be given to means by which any such Visitor might work with members of a department over a longer period to develop programs of self-evaluation and improvement. In particular, funding problems might need to be considered anew.

Further recommendations call for the dissolution of the committee and the publication of its findings and recommendations so that all members of MAA "who would be directly affected by any action on the subject of this report" might be fully informed about it. Finally, the committee commends the officers and members of sections for "their splendid cooperation in bringing the issues of accreditation and certification to the attention of the mathematics community." (Quoted material from Report of the MAA Ad Hoc Committee to Consider Accreditation and Certification in Mathematics published in *Math. Monthly*, February, 1972, pp. 164-68.)

Not all of the MAA's real or contemplated work with undergraduate education has a judicial or quasi-judicial base. The Consultant's Bureau, a group of "over thirty mathematicians chosen for their professional specialties, experience, educational interests, and geographical location," advises institutions in matters of curriculum planning for teacher training, pregraduate mathematics, applied mathematics, and any other phase of the educational process in which the mathematics department has an interest. Many of the Association's 28 geographically determined Sections "conduct projects which bring the objectives of the Association directly to college students and to prospective college students. These projects include conducting mathematical competitions, advising state departments of education on teacher certification in mathematics, advising high schools and colleges on course content and curricula, and providing lecturers." Another perhaps unexpected means of providing input from the professional mathematicians' group into undergraduate mathematics education is the Visiting Lecturer Program. This program, which has operated since 1954 with substantial NSF support, has as its aims the following four points: "(a) To strengthen and stimulate the mathematics programs of two- and four-year colleges; (b) To provide the mathematics staff and students in small colleges with an opportunity for personal contacts with productive and creative mathematicians; (c) To aid in the motivation of able college students to consider careers in mathematics and the teaching of mathematics; and (d) To create and strengthen ties between undergraduate colleges and graduate schools." The lecturers who service this program are equipped to provide advice on study and career opportunities, teaching problems, curriculum design, and programs in other institutions, in addition to formal lectures; and the program is open to all colleges without doctoral programs in mathematics. A Committee on Visiting Lecturers is available to help a school select a "lecturer appropriate for the particular purposes of the host institution."

Through a Committee on Assistance to Developing Colleges, MAA shows special concern for certain four-year colleges ("developing colleges") which serve students "whose potential may not be obvious on the surface." Many agencies have gotten into the "developing institution" business, usually intending to "help" black colleges, and almost all initially use somewhat condescending language to describe their activity. The Developing College Committee has made special efforts to attract teachers for such colleges through a separate employment register. There is also evidence of a growing concern in the Association with the special problems of two-year colleges, as well as with the means by which the resources of these institutions can be tapped to the advantage of the mathematical community. In general, the MAA appears to have tried and tried hard to serve the public interest and the improvement of teaching in schools and colleges. That it has done so somewhat clumsily or, from some perspectives, ineffectively may in part derive from the limitations of its parish perspective and in part from its lack of extensive experience with some of the areas which it has tried to touch—for example, teacher training and school curricular reform. If it is asked to work further with direct or indirect public support in these areas, it should probably be asked to keep more closely in touch with science, with the psychology of mathematical development, and with the sense that various "publics" may have of what mathematics in the schools is for.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

The American Institute of Biological Sciences, an "umbrella" type of organization with forty-one adherent associations and another ten affiliated associations, is "a national, non-profit, scientific and educational organization for individuals working or interested in the life sciences." It is difficult to determine how democratic or how elitist such a vast structure presently is. The Grobman essay reproduced below suggests that by adding individual memberships the organization has made itself both more democratic and stronger than it once was. A few facts about the structure of the organization may help clarify this issue.

Membership requirements are not particularly exclusive or profession-oriented in that individual members may be *actively engaged in or merely interested in* pursuits contributing to the development and advancement of the biological sciences. Nevertheless, most members of AIBS are Ph.D.'s. The majority are college teachers, although there are some high school teachers and research scientists.[1] Student and institutional memberships are also available. Since individual dues are $16 and students pay $8, few people are probably "kept out" exclusively by financial considerations. Although membership of AIBS totals only 13,000, the combined membership of its many sister societies numbers some 60-80,000.[2] And the numbers are growing; student membership has tripled since 1964, and membership renewal is high. There are seventy student chapters which volunteer ideas to the main organization and produce conference papers in both pure and applied biological sciences.[3]

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[1] The emphasis of the association in the past has been heavily research oriented, but there is an increasing concern for the state of education in the biological sciences.

[2] The wide-range is attributable to the fact that many members belong to more than one society.

[3] AIBS publishes several journals (all contain only referred articles) and newsletters, all with separate editorial policies. Its Annual Meeting has, in addition to a business meeting, a plenary session on a topic of current interest; a recent one dealt with the environment and the biologist's role in preserving it. In 1970 AIBS provided some two hundred experts as individual consultants to federal agencies.

Where the extent of democracy is difficult to assess is at the governing board level. AIBS has a governing board which represents all its subsidiary societies. One representative from each adherent society sits on this board, which elects all other officers and generally oversees all activities of the Institute. The president of the association serves one year as vice-president, one as president, and one as past-president; it is his responsibility to appoint the nominating committee. There is also an executive committee which, among other duties, appoints the executive secretary of the Institute. There are currently eight professional staff members in the AIBS offices in Washington, D.C. Where such an organizational hierarchy exists, the degree to which the governing board "represents" its group, depends very much on intuition and "being attuned" to one's constituency. Direct democracy involves complicated regulations in AIBS. It takes a petition of twenty-five individual members to propose additional nominations for membership-at-large on the governing board. Amendments to the constitution are proposed and submitted to the governing board by its own members, by an adherent society, or by petition of one hundred individual members; they must be approved by three-fifths of the members of the governing board. This does not necessarily mean that the governance of AIBS is undemocratic. It does mean that it requires some effort and time to affect its governance.

AIBS may be able to maintain itself without recourse to democratic structure since it is not supported predominantly by membership dues. In fact, dues account for only 17.8 per cent of the income of the Institute. Publications net an additional 13.6 per cent; the annual meeting brings in another 8 per cent; and various other sources, such as royalties, the professional register, and interest, provide small sums. However, in 1968 grants and gifts, mostly from NSF, the Atomic Energy Commission, and the Office of Naval Research, supplied $736,850 or 57 per cent of the annual budget of AIBS. For 1970 the total from NSF alone was $1,248,816, while in 1971 it dropped to a modest $693,991. Some of the projects which reaped this rich harvest included science information systems, a national register, a visiting scientist program, biomedical engineering research, international cooperative scientific activities, and environmental studies. There were also projects in environmental education and course content improvement at the undergraduate level, a program for the development of teaching modules for education of life science technicians, and a plan to establish field stations in biological teaching and research. This windfall of outside grants may make the organization simultaneously less dependent on its membership and less democratic.

Whether that is a good thing for a society interested in education is questionable.

Obviously, the interest of AIBS in science education is growing. At the elementary and secondary school level, there was the Biological Science Curriculum Study (BSCS), one of the great school science efforts which came in the wake of Sputnik and a project which has been in and out of AIBS. The sad history of BSCS's midcourse relationship to AIBS is given below (page 84ff). BSCS has been funded by NSF since 1958 to the extent of some $6.5 million. Its objective was to evaluate the content of the present biological science course offerings, to determine what aspects of biology could and should be taught at each level, and to recommend how this goal could best be achieved, partly through creating course materials. In the past three years, BSCS has formulated three courses for the high school biology curriculum; it also publishes a monthly magazine. The program has received mixed reviews. A primary criticism of the standard BSCS curriculum from the beginning has been that it is elitist, that it does not meet the needs of about one-fourth of the students attending school. These students are characterized by Arnold Grobman, the first director of BSCS, as "youngsters who have developed a consuming interest in popular music, sports cars, political activism or athletics" and are not interested in school work: youngsters interested in a specific vocation and single-minded in pursuit of it; students contemplating entering their fathers' businesses; students who speak a 'foreign' language in their homes; and students from 'culturally deprived' homes. To meet the needs of such students, BSCS developed a special materials program which it claims to be successful but which requires 'special teacher preparation' (Grobman, *The Changing Classroom*, pp. 255-61). Apparently BSCS would not form a useful adjunct to a career education program since a single-minded pursuit of a vocation interferes with it; and one finds in the literature of BSCS little evidence of an effort to adapt it to meet the needs of American students who come from a background which has its own language or ethnoscience, a matter which is important given the Study Commission's perspective. Indeed, there appears to be less sensitivity to the diversity of culture among oppressed American peoples in the BSCS literature than there is to diverse international cultures (Cf. Grobman, "International Challenges and Opportunities," *The Changing Classroom*, pp. 221-43). Internal groups speaking a language other than English or bearing a culture which has not acquired industrial middle-class characteristics appear in the BSCS literature, particularly in the earlier literature, to be relegated to the caste of the 'culturally deprived.'

AIBS is not only interested in school curricula and the education of teachers. It has had some interest in general undergraduate education. The Commission on Undergraduate Education in the Biological Sciences (CUEBS), another AIBS-NSF project, was established to effect changes in the undergraduate biology curriculum. Members of the group feel it was a success. Over forty publications were produced, covering such basic subjects as "How to Get Grant Funds" and "Studies in Curriculum Changes." A study of a core curriculum was undertaken, and several other curriculum study groups were launched under the auspices of CUEBS. The AIBS education division has taken up where CUEBS left off.

Other educational activities of AIBS relevant to the reform of undergraduate education include BIOTECH (a system of modular instructional components for training biological technicians), a department chairman's program, a visiting biologist series, and a consultants' bureau which gives expert assistance in review of curriculum or development of facilities to any biology department which requests the service. Publications have dealt with pre-service preparation of secondary school biology teachers, use of modules in college teaching, and pre-service preparation of college biology teachers. Several new courses have grown out of all this effort or have been developed elsewhere and received the blessing of AIBS.

AIBS has not entered directly into the development of program approval (accreditation) guidelines for science teachers, these having been developed for biology teachers by the American Association for the Advancement of Science (AAAS) in league with the National Association of State Directors of Teacher Education and Certification (NASDTEC) and published as "Guidelines and Standards for the Education of Secondary School Teachers of Science and Mathematics" (1971). However, through CUEBS, AIBS did review the guidelines and had consistent input prior to publication; its standard guide on the "Pre-Service Preparation of Secondary School Biology Teachers" is footnoted in the AAAS-NASDTEC document, and the suggestions as to subject matter topics appropriate to the education of the biology teacher are nearly identical ("Guidelines," pp. 16-18; "Pre-Service Preparation," pp. 45-46). Moreover, both sets of guidelines are tied to the BSCS curriculum, a curriculum in part sponsored by AIBS and from which it appeared to hope at one time to gain royalty monies (Cf. Grobman, below). It should be said in favor of the "Pre-Service Preparation of Secondary School Biology Teachers" that the document contains some very humane observations on the need for reform of college biology teaching (pp. 10-11), for unifying the total program preparing the biology teacher, and for exposing the student to ethical and historical issues in biology.

The biologists apparently do not aspire to such tight control of departments as do the chemists. AIBS has rather consistently backed off from the accreditation issue, depending rather on published models for adequate biological education and guidance in the development of laboratories. An article carrying the endorsement of the AIBS Education Committee, the AIBS/CUEBS National Task Force on Two-Year College Biology, and CUEBS has recently come out in opposition to the institution of accreditation procedures on the part of AIBS. One wonders if the superb imagination which has characterized recent work in the biological sciences (though not in biological education at the lower levels) could have taken place in departments regimented by national accrediting (Mullins, *Communication Among Biological Scientists*). On the other hand, NCATE reviews may depend on AAAS-NASDTEC AIBS-related guidelines in a somewhat mechanical fashion (Cf. e.g., the Western Michigan NCATE review, p. 125).

AIBS appears then, not to be an altogether democratic organization (although it is becoming more so) and a professional society which is not deeply concerned with the schools (although it is becoming more so). Few challenge its authority in theoretical areas, and few would claim that it is either as inept as it once was in its relations with the government or as adept as the biomedical lobby is. However, future studies may wish to propose other questions in reference to its role in undergraduate education and the education of teachers. For example:

(1) Has AIBS properly attended to issues raised by the biological science or ethnobiologies of non-Western American cultures, or do its curricula assume that third world people are empty vessels to be filled with Western biological wisdom?

(2) Do its curricula and courses need revision in the light of new policy work going ahead in environmental studies and new experiments in interdisciplinary studies, biological science, and career education, such as that now being carried ahead at the University of Wisconsin at Green Bay and at Prescott College?

(3) Are its model curricula sufficiently contextualized and its guidelines for teacher credentialling practical, given the Griggs decision and other recent decisions requiring that a professional's skill in relation to a specific job description be validated prior to licensing?

To these questions, we have no easy answer.

Supplementary Essays on Scientific Professional Societies

Supplementary Essay I

The Pretend Professional Society and Influence on Government Agencies*

By Daniel Greenberg

[In the introduction and the materials on the scientific societies, we indicated that the professional societies in the disciplines appear to have, as a major function, the influencing of federal research and training monies policy as it bears on the prosperity of their discipline—hence, the frequent moving of offices to Washington in the last two decades, the use of persons prominent in professional society circles for congressional testimony for bills assisting the interests of the discipline-oriented societies, and the use of the society's members as consultants on federal panels and of society newsletters and communication channels as vehicles for influencing legislation and program administration. If we admit Toulmin's distinction between the 'theory-developing side' of a professional group (its judicial role in theory assessment) and the 'political side' which is partly concerned with credentialling judges and partly with maintaining the resource-base of the profession, the Washington work of professional societies obviously falls into the 'political side' of Toulmin's analysis. However, commonly the political side of a discipline-oriented professional society's Washington efforts derive their force from the assumption that the leaders in the society somehow *represent* the needs of a 'field of study' (or 'paradigm' in Kuhn's terms) and the further assumption

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*The material in this section, except for bracketed commentary, was excerpted from a chapter entitled "Mohole: The Anatomy of a Fiasco" in Daniel S. Greenberg's *The Politics of Pure Science* (New York: New American Library, 1967).

that filling these needs is somehow in the national interest or will contribute to the advancement of knowledge. However, it appears that, in some cases, needs are simply invented to capture public monies and the paraphernalia of the professional society may also be invented to invest the claim on public monies with legitimacy. Daniel Greenberg's analysis of the history of the American Miscellaneous Society (AMSOC) and its activities in getting the famous "Mohole" project going, suggests (1) the possible need for a public interest monitoring of all professional society claims on public monies; and (2) the need for some fairly consistent public scrutiny of the structure and claim to legitimacy of discipline-oriented professional societies. It also shows that 'the academy,' when its own political interests are at stake, may make an effort to impose an unprofessional conformity in matters of professional judgment.]

In 1952, at the Office of Naval Research, in Washington, two staff geophysicists, Gordon Lill and Carl O. Alexis, were sorting applications for research support. Lill and Alexis soon noticed that existing research categories were inadequate for accommodating the diversity of the proposals, and, as a consequence, a good number had to be assigned to the "miscellaneous" pile. Whimsy being their mood, they then and there founded the American Miscellaneous Society—conveniently referred to as AMSOC—and in short order many outstanding figures of American geophysics proudly asserted their affiliation with this latest addition to the rolls of professional organizations. It is clear, however, that AMSOC was simply a humorous twist upon what has been referred to as the "invisible colleges" of scholarship—small, informal networks of people who work in the same field, and who, on the basis of personal or professional acquaintanceship, easily communicate about the stuff of their trade. *AMSOC's raison d'être simply was the comic contrast that it provided to the traditional ways of established scientific societies. In fact, if it had been any less of an organization, it would have been non-existent* [italics inserted].

[AMSOC Organizes]

With a great sense of camaraderie and perhaps even a feeling of naughtiness for dispensing with the ponderous ways of the established professional organizations, AMSOC members ostentatiously disavowed membership rolls, bylaws, officers, elections, publications, and formal meetings. When they did concede to form, they were facetious all the way. *Like all scientific societies, AMSOC had disciplinary subgroupings: however, in the case of AMSOC these were alleged to be in Etceterology, Phenomenology, Calamitology, General-*

ogy, and Triviology [italics inserted]. AMSOC also maintained relations with the Committee for Cooperation with Visitors from Outer Space, as well as with the Society for Informing Animals of Their Taxonomic Position Like all scientific societies, it awarded an annual prize for outstanding accomplishment. AMSOC's prize was the Albatross Award. A quorum of two sufficed for AMSOC meetings, and these usually took place over drinks at the Cosmos Club. AMSOC performed no visible function beyond delighting its amorphous "membership," which tended to be concentrated in geophysics and earth sciences, the fields of its founders. Occasionally, to the great self-satisfaction of those associated with AMSOC, marvelously grotesque "scientific" propositions would emanate from its "meetings." At one of these, for example, detailed calculations were prepared to demonstrate the feasibility of solving Southern California's water problems by towing antarctic icebergs to Los Angeles and melting them into the water system. Socially, AMSOC was delightful; scientifically, it was inconsequential, except to the extent that its "members" shared common professional interests and, when together, were more likely to engage in shoptalk than in whimsy; politically, in the affairs of the scientific community, AMSOC neither sought to be an influence, nor, considering the stuffiness of the community, could this prankster organization reasonably aspire to influence.

[AMSOC Fills Need for Earth Science Lobby]

Such were the first five years, which brings us to the spring of 1957. This was a time, it is important to note, when both the amount and rate of growth of federal support for many fields of science had become strikingly large. Physics was doing splendidly with the Atomic Energy Commission; the biomedical sciences were entering a period of extraordinary growth underwritten by the burgeoning budget of the National Institutes of Health; and space researchers, though later wishing they had thought bigger and moved faster, were laying the foundations for a great program of space exploration. However, largely left out of this affluence were the earth scientists, for whom, as was the case with the chemists, no exclusive source of support existed in the hierarchy of federal research agencies. The ancient United States Geological Survey, deeply embedded in the Department of the Interior, was the focal point of government interest in the earth sciences, but the Survey was small, conservative, and most damning of all, as far as academic science was concerned, did not give grants: its funds were almost entirely for the use of its own staff members. NSF and ONR put some money into the earth sciences, but in both these agencies, the earth sciences had to share the available wealth with dozens of other fields of research.

These being the economic facts, the spirit of chauvinism and evangelism dictated that the earth scientists must do something to improve their position. That something turned out to be Project Mohole, and, fortunately, there is a remarkably frank account of the moment of conception from one who was there, the late Harry H. Hess, chairman of the Princeton geology department. Speaking at an earth sciences symposium in 1965, when Mohole, having overcome much travail, was alive and apparently en route to success, Hess spelled out the following tale of genesis:

> The Mohole project started in March, 1957, at a National Science Foundation panel meeting where eight scientists were gathered to analyze projects submitted from earth scientists of the country. We had something like sixty projects to review in two days. A week's work was involved in reading these projects before we met. At the end of a two-day session we were rather tired and Walter Munk [a renowned ocea[illegible]pher at the University of California Scripps Institution of O[illegible] mentioned that *none of these proposals was really [illegible] an understanding of the earth,* although many of [illegible] good. If someone wanted to study the clay minera[illegible] such a formation . . . well, this was a good thing to do; *however, it would not solve a major problem about the earth.* . . . We had gone through sixty of these proposals, most of which we rated as being very good projects; they should be supported. Walter Munk commented that we should have projects in earth science—geology, geophysics, geochemistry—*which would arouse the imagination of the public, and which would attract more young men into our science.* We are very short of geophysicists, for example, and we were very short of oceanographers also at that time. It is necessary at times to have a really exciting project. . . . Walter Munk suggested that we drill a hole through the crust of the earth. I took him up and said let's do it; let's not drop it here, and we did go on. (The italics are my own, for purposes of emphasizing two of the key motivations of Project Mohole: science and publicity. Munk confirms Hess's account as an accurate portrayal of the project's birth.)

Now, all of these present were well aware that a prodigious feat of engineering would be required to drill through the crust of the earth. Covering our planet like a bumpy orange skin, the crust stands in thicknesses of 3 to 40 miles: immediately below it lay the objective of the drilling venture, the mantle, a dense, rocky mass, some 1800 miles thick, which geophysicists wanted to sample as part of their efforts to answer multitudinous questions about the origins and history of the earth, the formation and drift of continents, the flow of heat from the earth's interior, and the formation of mineral resources.

The progression from crust to mantle was believed to be indicated by a change in the velocity of seismic transmissions, a change which was first detected by a Yugoslav geologist, Andrija Mohorovičić, thus leading to the term Mohorovičić discontinuity, conveniently shortened to "Moho," and inevitably transformed into "Mohole" when the scheme to pierce the crust got underway. But in Project Mohole, the name was virtually the only thing that was to come easily. As if by a gross perversity of nature, the crust covering the mantle was so distributed that it was thinnest under the deep sea and thickest on dry land. At ocean depths of 14,000 feet near Puerto Rico, a survey later indicated, it might be possible to reach the mantle by drilling 18,000 feet into the bottom. On land, it would be necessary to drill at least 50,000 feet. The deepest hole yet drilled on land was 22,570 feet—which drilling engineers considered a stretching of the state of the art. At that depth heat, corrosion, and the weight of nearly five miles of drill string severely strained existing technology. At sea, the deepest drillings had gone merely a few hundred feet. If, along with great new scientific understanding, the progenitors of Mohole sought "a really exciting project," something "which would arouse the imagination of the public," drilling to the mantle was undoubtedly the best they had to offer. The scientific motivations were valid and substantial—samples of the mantle could help answer many major questions in geophysics. But the circus aspect also was substantial. As Willard N. Bascom, an oceanographic engineer who became director of Project Mohole, later wrote, Munk's proposal to drill to the mantle evoked the observation, "This would be the perfect antianalogue of a space probe. Think of the attention it would attract to the earth sciences."

[AMSOC 'Deep Drilling' Committee Formed]

And this brings us back to the American Miscellaneous Society. How was the drilling venture to proceed? Turn it over to AMSOC, Hess suggested. The following month, at a "wine breakfast" at Munk's lovely home on a coastal hillside in La Jolla, California, AMSOC made its first compact with conformity: it chose a chairman, cofounder Gordon Lill, who was elected by acclamation, and it formed a Deep Drilling Committee to accept the challenge of drilling through the earth's crust. Nominated to serve on the committee were Hess and Munk; Harry Ladd and Joshua Tracey, both of the

United States Geological Survey; and Roger Revelle, director of the Scripps Institute of Oceanography. As a group, they were well connected with the substantive frontiers of their profession as well as with the political, and especially military, underpinnings that supported their work. Revelle, for example, had served on the staff of the Office of Naval Research in 1946 and 1947, and was a consultant to ONR; Hess and Munk were both members of the Academy, and the former, a naval reserve captain who had held a seagoing command, was also chairman of the Academy's earth sciences division. Ladd had served on the scientific staff of one of the early postwar atomic tests in the Pacific.

One week after the La Jolla proceedings, the members of the newly formed committee were filing into the Cosmos Club for their first meeting, when they encountered there in the lobby one of the senior eminences of their profession, Maurice Ewing, director of Columbia University's Lamont Geological Observatory. Ewing recalls that he was passing the time while waiting for an engagement unrelated to the affairs of AMSOC. His colleagues told him of the venture and urged him to come along and join AMSOC. When he protested that his professional interest was the sediments on the ocean bottom, not the deep underlying rock, he was told, "Maurice, you're thinking too small." He joined AMSOC, later resigned in disgust, but subsequently was persuaded to return.

[AMSOC Allies with National Academy of Sciences and Achieves the Needed 'Conformist' Organizational Facade]

If Ewing was thinking small, he definitely was out of harmony with his colleagues, for AMSOC was swept up with the excitement of the Mohole venture. At that meeting in the Cosmos Club, it was decided to ask NSF for $30,000 for a feasibility study.

However, under the cautious and conservative hand of Waterman, the Foundation was not disposed to give funds to so ephemeral an organization as AMSOC. Taking this rebuff in stride, the once-freewheeling scoffers at institutionalism cheerfully withdrew their applications and took steps to bring their organizational facade into conformity with the preferences of the financial source they wished to tap. (Applicants are usually offered the option of withdrawal to avoid the ignominy of rejection.) The first step was for Hess, of AMSOC and the Academy, to ask the Academy if it would be willing to accept a grant from NSF to study the feasibility of Mohole. If there was any question about the desirability of such a study, Hess could point to a series of resolutions that had been adopted in recent months by the most prestigious professional societies in the earth sciences, for shortly after the meeting at Munk's home and at the Cosmos Club, the International Union of Goodesy and Geophysics had gone on record as urging "the nations of the world and especially those experienced in deep drilling to study the feasibility and cost of an attempt to drill to the Mohorovičić discontinuity at a place where it approaches the earth." The authors of this resolution were Hess, Revelle, and a British colleague. Similar resolutions were also adopted by the International Association of Physical Oceanography and the International Association of Seismology and Physics of the Earth's Interior. And, as if the gods of geophysics had decided to bestow their greatest blessing upon the venture, a Russian geophysicist rose at one of these meetings and proclaimed, "We already have the equipment to drill such a hole; we are now looking for the place." Ten years later, the Russians possibly were still looking for the place, for they offered neither evidence nor claims that they had proceeded with the project. But East-West competition was money in the bank and AMSOC knew it.

The Academy was indeed willing to accept NSF funds, and on April 2, 1958, an application for $30,000 went out to NSF from the National Academy of Sciences–National Research Council, Division of Earth Sciences, Harry Hess, chairman. Four days later, the Academy took the unprecedented step of draping its prestigious mantle over an outside committee. Since NSF would not stake a loose-floating AMSOC committee, the Academy had agreed to give it a home. Tradition dictated against such a step, but AMSOC, now grown to nine members, included five members of the Academy; Hess, of course, was an officer of the Academy, and as a consequence, goodwill and personal confidence overrode tradition. On April 8, 1958, just a bit over a year since Munk had proposed piercing the earth's crust, the AMSOC enterprise was formally constituted as the AMSOC Committee of the Division of Earth Sciences of NAS-NRC. Since the frivolity inherent in the title "Miscellaneous Society" was not consonant with the somber mien of the Academy, it was decided that henceforth AMSOC would be a word and not an abbreviation.

[Bascom Affiliates with AMSOC as Executive Secretary]

With the Academy affiliation there also came a chance occurence that was to figure large in the affairs of Mohole. Next door to Hess's office in the Academy building worked a restless young engineer named Willard Bascom. Bascom had studied engineering and geology at the Colorado School of Mines, had left without a degree, and then had gone on to a variety of jobs. During World War II, he was a mining engineer in Colorado, Idaho, Arizona, and New York. In the years after the war, he was a research engineer in oceanography at the University of California, lectured on oceanography at the Navy's Postgraduate School, and took part in monitoring the effects of nuclear weapons testing in the Pacific. In 1954, Bascom joined the staff of the Academy to handle a variety of jobs. On a staff that was not especially loaded with ambitious performers, Bascom quickly stood out. In 1957, he served as United States delegate to the International Geophysical Year Conference on Oceanography, in Sweden; he also became executive secretary of the NAS-NRC committees on meteorology and maritime research. With the excitement of Mohole spilling out into the corridors of the Academy, Bascom inevitably became interested in the project, and not long afterwards was asked by Hess to become AMSOC's executive secretary and to organize and conduct studies on how the project was to be carried out. Normally, Academy staff men are submerged and cautious behind the commuting luminaries who reap the glory, but the degreeless engineer Bascom was not disposed to cautious anonymity, or any great reverence for the prestigious statesmen of science. An energetic and extraordinarily inventive engineer, he interpreted Hess's mandate generously, and began efforts to make Project Mohole a reality.

[AMSOC Goes After Federal Money]

Now housed in the Academy, AMSOC looked properly respectable, and, in response to its application for $30,000 to get the project underway, NSF ladled out half the requested amount, which was characteristic for the financially pressed foundation. Mohole was now a going concern—but going toward what? Since this question was to lacerate the normally harmonious relationship between NSF and the Academy, and eventually tear apart the project, it is worth noting with some care just what it was that AMSOC proposed when it sought money from NSF. The application, bearing the names of all the AMSOC members, opened with the statement that funds were requested "for support of the study of the feasibility of drilling *a hole to the Moho discontinuity* [italics supplied]." It then went on to list the scientific benefits that might ensure "If an authentic sample of the material below the discontinuity were obtained." It made reference to various measurements that could be made in "the hole." But it also stated the importance of obtaining samples of the sedimentary materials that lie above the mantle. Was this simply a proposal to drill one hole down to the mantle, pull out samples along the way, pack up, and terminate the project? Considering the cost of the drilling equipment, it would be extravagant to design and build it for the purpose of drilling one hole, as extravagant as it would be to design and build a telescope for simply one look at the heavens. But the application clearly suggested, and NSF then so interpreted it, that AMSOC was thinking of a one-shot affair.

In any case, with the NSF money in hand for a feasibility study, Mohole was officially under way, administered through the following organizational patchwork: AMSOC was responsible for supplying scientific guidance, but since AMSOC was a parttime organization, and its executive secretary, Bascom, was fulltime, the energetic Bascom felt few restraints in running the show. Meanwhile, the Academy provided an institutional base and NSF paid the bills. For both NSF and the Academy this arrangement was a departure from their traditional forms of operation. In its role of "banker" for basic research, the Foundation normally gave grants only to educational organizations actively involved in the conduct of scientific research. Its recipient in this case, the Academy, had no educational function whatsoever; but more important, as a matter of practice, the Academy normally eschewed any active role in research, on the premise that, as statutory scientific adviser to the federal government, it should not be operationally involved in any of the matters on which its counsel might be sought. Eventually, the two institutions were painfully racked by these arrangements, but in the early days of Mohole, goodwill, excitement, and hope obscured seemingly unimportant departures from administrative form. Who was in command of the project and what was its objective? Like a boatload of efficient and harmonious oarsmen, everyone was pulling together; the issues of leadership and direction did not arise.

At several meetings in the fall of 1958, AMSOC reached out further into the geophysical community to enlarge its membership, and three panels were established: Hess headed the panel responsible for locating a drilling site; Ladd was named to head the panel on scientific objectives and measurements, and William B. Heroy, Sr., a veteran petroleum geologist, headed the drilling panel. As for the cost of the project, everyone concerned agreed that it would be high in relation to the funds normally available for the earth sciences, but compared to the gusher of funds that Sputnik had loosed into the space establishment, the amounts were trifling. In an article in *Science* co-authored by Arthur Maxwell, of the ONR staff, and AMSOC chairman Gordon Lill, it was confidently stated: "The Mohorovičić Discontinuity project probably can be accomplished for $5 million. Earlier and larger estimates were out of bounds. Five million dollars is a lot of money, but compared with the many millions of dollars that are being spent on moon rocketry and the billions spent on atom bombs, this is not an overly ambitious scientific venture." To which they added:

> The American Miscellaneous Society, with its flair for seeing the lighter side of serious problems, likes to quote the following proverbs when discussing the "Moho": (i) "When going ahead in space, it is also important to go back in time." (ii) "The ocean's bottom is at least as important to us as the moon's behind!"

At about the same time, to help explain the project to an increasingly interested public, Bascom spelled out its past and speculated on its future in an article in *Scientific American.* The article, though not an official statement of the AMSOC committee, undoubtedly had its endorsement and, at that point, was the most definitive statement of what AMSOC–the originator of Project Mohole–thought it had in mind when it sought support from NSF. But conceptually, it introduced some important new elements into the project–particularly the idea that Mohole was not a one-shot affair. Wrote Bascom: "The principal objectives of drilling to the mantle are . . . to obtain samples of the various rocks of the mantle and the deep crust. . . . Although reaching the mantle is the ultimate objective of the Mohole project, *an intermediate step* is likely to yield *equally valuable and interesting information.* . . . *No one site or hole* will satisfy the requirements of the Mohole project [italics supplied]."

[CUSS Developed]

Bascom then went on to suggest a four-step program, starting with a 260-foot former Navy freight barge, the *CUSS I,* that had been converted into a drilling barge by the four oil companies whose initial letters comprised its name, Continental, Union, Shell, and Superior. First, wrote Bascom, studies would have to be made to improve upon the best existing drilling equipment and techniques; second, modifications would have to undergo trials at sea; third, "when the results of the first tests are in, modifications will have to be made in the drilling methods: *this in turn may require a practical readjustment of scientific requirements.*" Finally, "the hole to the mantle will be drilled. It will be very difficult; there are no illusions about that. But it will remain the ultimate objective of the Moho project." In the course of the article, Bascom incidentally noted the Soviet Academy of Sciences had appointed a committee similar to AMSOC. "Perhaps there will be a race to the mantle," he observed.

Now the administrative pace of Mohole began to accelerate. The National Science Foundation awarded grants totaling $80,700 for drilling site surveys to be conducted by the Woods Hole Oceanographic Institution and the Lamont Geological Observatory. In neither case did the Foundation consider it necessary to scrutinize the venture it was funding, and, for that matter, why should it have? The scientists associated with Mohole were the outstanding figures of geophysics, and, in some instances, were among the government's principal advisers on geophysics and earth sciences. Hess and Heroy, for example, were on NSF's advisory panel for earth sciences. Anyone knowledgeable in these fields would agree that sampling the mantle was an important scientific objective, one that would greatly contribute to the solution of many questions of importance to geophysics. As for the question of what priority the Mohole project should occupy in the general scheme of federal support of research–that simply never arose. The ideology of basic science held that all unanswered scientific questions were equal; the only inequality lay in the ability of the various researchers to tap into the federal treasury. And, in the case of the Mohole, those interested in reaching the mantle were eminently able to do so because of the esteem with which they were regarded at NSF.

["Mo-Ho-Ho and a Barrel of Funds"]

In early June, within a matter of months after Lill and Maxwell had published the assertion that the "project can be accomplished for $5 million," AMSOC's executive committee reconvened at La Jolla and decided upon a tentative budget of $14 million "for the entire project." What conceivable explanation is there for the great disparity between the two figures? Part of the answer is that these were scientists, not engineers; they were neither trained for, nor accustomed to dealing with, the complexities of estimating the design, construction, and operating costs of a major engineering project. But what is perhaps more important, the atmosphere pervading big science and technology was such that there was no pressure to be mindful of economics. As one White House science adviser later explained his own lack of close attention to Mohole: "I took a quick look at the project and decided, 'Why not. It's only going to run about the cost of one space shot.'" At that same meeting where the $14 million figure was introduced, it was decided that AMSOC should actually run the project–with Bascom elevated from staff obscurity to the position of project director–and not merely serve on the sidelines as a scientific adviser. The governing board of the Academy was amenable to this, though there is nothing to suggest that that part-time body ever examined closely the implications of putting the Academy into the business of running a pioneering deep-sea drilling program. Meanwhile, NSF awarded another $80,500 to pay the salary and expenses of the now-blossoming AMSOC staff. A few months later, as plans began to jell, AMSOC, upon application to NSF, was assured of up to $1,250,000 to get underway with what was essentially Bascom's four-stage drilling program. And not long afterwards, the Washington Pick and Hammer Club, composed almost wholly of geologists and geophysicists, put on its annual show. The title that year was *Mo-Ho-Ho and a Barrel of Funds.*

Now, with speed and success that obscured some of the difficulties of drilling all the way to the mantle, AMSOC's professional staff carried out Mohole's first phase, a series of test drillings in the vicinity of La Jolla and Guadalupe Island. The drilling vessel was the one suggested by Bascom, the converted Navy barge *CUSS I,* operated under contract by its owners, the Global Marine Exploration Company, but modified, equipped, and run under Bascom's direction. Early in 1961, the *CUSS I* set out from San Diego to test the feasibility of drilling in very deep water–ten times deeper than any in which oil drilling attempts had been successful. Of critical importance to the operation was the positioning system devised by Bascom for holding the vessel relatively motionless on the open sea while the drilling bit chewed into the bottom. Since the depths at which the Mohole could be most easily reached were too deep for anchoring a heavy vessel, Bascom sought the required stability with a dynamic positioning system that employed four centrally controlled 200-horsepower outboard motors located around the hull of the *CUSS I.* Surrounding the vessel was a ring of buoys to provide reference points. As wind or current worked to push the *CUSS I* away from its station directly above the drilling site, the appropriate motor, operated by a single control, would push in the opposite direction. The system, which had aroused considerable skepticism when Bascom first proposed it, was able to hold the *CUSS I* virtually motionless in a twenty-knot wind.

The *CUSS*'s performance was spectacular, and culminated in a record-smashing boring of 601 feet into the ocean bottom, in water about two miles deep. And Bascom's AMSOC crew completed the operation within a matter of weeks and within the budget they had stated beforehand. Once again, all this took place in a period of extreme goodwill, when little concern was paid to organizational detail. Bascom, though employed by the Academy as director of the project, was designated a technical representative by NSF. As he later explained before a congressional committee, "This method was an administrative makeshift, but it worked, primarily because all of us were anxious to make the tests a success."

Successful as the first phase was, it had literally only scratched the soft bottom of the ocean, for to get to the mantle, it would be necessary to work in some three miles of water and drill about 15,000 feet into the floor—most of the way through rock so dense that at least two years of nonstop drilling would be required. No equipment capable of this feat was in existence. Thoughts now turned to Phase Two of the project, and it was at this point that strains began to be felt in the administrative patchwork that had theretofore served so well. It was the spring of 1961, nine years after AMSOC's birth, four years after Munk had first proposed piercing the earth's crust, and a period of stocktaking was at hand. Bascom and his AMSOC staff triumphantly wrote up the *CUSS I* experience, *Experimental Drilling in Deep Water,* which was issued as an Academy document. Included was a congratulatory message from President John F. Kennedy, addressed to Academy President Bronk and NSF Director Waterman. Kennedy extended his congratulations to all associated with Project Mohole "and especially to all those on board the *CUSS I* and attendant vessels who have combined their talents and energies to achieve major success." Amidst success, there was no sign that events were so proceeding that the much-lauded Bascom group would soon be cast out of the project.

[AMSOC Trouble to Academy]

For the conservative and tradition-minded Academy, AMSOC's presence as a committee of the Division of Earth Sciences was disconcerting. Unlike its Soviet counterpart, which was deeply involved in the direct administration of research, the Academy had so conducted its affairs as to stand in pristine aloofness from any matters on which its counsel might be sought. Now, with Mohole's Phase One successfully completed, the Academy's governing board decided it was time to get out. On June 13, 1961, Academy officials told AMSOC that the Academy, while "desiring to advance the Mohole project in every way, urges that means be found that will not involve the Academy-Research Council in the actual operation of the project. . . ." Thus, the Academy wished to disengage itself. But, as it turned out, so did AMSOC. The day after the pronouncement from the Academy AMSOC Chairman Lill informed the Academy of a decision that had been reached by the committee. Writing to Academy President Bronk, Lill stated: "It appeared to the Committee that the administrative demands of continuing work at sea, and the deliberate pace of the Committee activities do not mix well, and that we must reexamine our position. We decided that the AMSOC committee should be [sic] in the future concern itself with matters of scientific policy, engineering review, and budget. . . . We consider that we are responsible to both the National Academy of Sciences-National Research Council and the National Science Foundation. The dual responsibility arises because of our origin and existence in NAS-NRC, and because of our financial support from NSF. In this relationship we may properly act as the representatives of NAS-NRC in its role as adviser to the National Science Foundation for drilling to the mantle." If AMSOC was to assume a purely advisory role, who would actually run the project? AMSOC's recommendation was that Phase Two of Mohole should be contracted out to an industrial or academic organization, and it offered a list of eleven possible candidates–nine oil or oil drilling companies, an aerospace firm, and the Scripps Institution of Oceanography–from which it said it had "received, or learned of, expressions of interest." As for Bascom's group, AMSOC stated that "under our auspices for purposes of establishing Project Mohole, there has been assembled a technical staff that desires as a body to continue with the project. The AMSOC Committee desires to retain the staff intact on the project. We recommend, therefore, as a part of the terms of the prime contract, that the contractor must agree to make our staff the nucleus of his endeavor by absorbing them into his organization." The recommendation ran counter to established patterns of organizational administration. Why should a contractor accept outside dictation on who is to staff his organization? AMSOC apparently recognized the presumptuousness of its proposal, for it noted, "These terms may have inherent difficulties, but we may not overlook our responsibility to the staff, at least some of whom may well make ocean basin exploration their life profession." And, in the expectation that goodwill, as in the past, would override all difficulties, AMSOC added, "If difficulties arise, then the AMSOC Committee or its executive committee will promptly meet with its staff to seek appropriate resolution."

[AMSOC's Larger Plan]

Having proposed an administrative setup largely based on wishful thinking, AMSOC proceeded to set forth a program so marvelously kaleidoscopic that it easily could mean whatever any partisan chose to make it mean. The only certainty spelled out in the budget was that for fiscal 1962, which began in sixteen days, a minimum of $4,250,000 would be required. How this was arrived at is clear: AMSOC simply threw together all the figures it could reasonably or otherwise, include, such as $50,000 for "turbodrill studies" in France; $10,000 for "drilling tools"; sixty days at sea, at $3,500 per day, for a ship, yet to be designed, built or tested, whose construction and equipping was budgeted for some $2 million. Also included was an $80,000 item to carry the AMSOC staff for ninety days until it was transferred to the proposed contractor, after which the support of the staff would be met out of a $600,000 item for the salary and administrative costs of the contractor.

Toward what objective was this wealth to be directed? On the basis of AMSOC's own pronouncement, unanimously adopted, NSF could reasonably conclude that a hole to the mantle was the objective—and nothing else. "We are agreed," AMSOC reported, "that the major scientific objective of Project Mohole is to drill to the earth's mantle through a deep ocean basis. . . . Also exciting, and of prime scientific importance, is the fact that we now have a new tool, the floating drilling vessel, with which to explore thoroughly the sediments and upper crustal layers of the ocean basins. We find, however, that the major objective of the Committee will entail work enough, and that *we must recommend this possible exploration program for separate scientific and financial consideration* [italics supplied]." But at the same time AMSOC acknowledged uncertainty on the question of whether sufficient data had been accumulated with *CUSS I* to design a vessel that could drill to the mantle. Bascom, who had more experience in drilling on the high seas than any member of the AMSOC committee, insisted that it would be necessary to build and experiment with an "intermediate" ship to obtain the data for the "ultimate" ship. But Bascom was a staff employee of Project Mohole, not a policy maker. Furthermore, the committee that employed him was disengaging itself from operational involvement in the project, and was putting him and his staff up for employment by a still unselected contractor. On the other hand, AMSOC's own drilling techniques panel had concluded that "the ultimate ship should be developed immediately rather than an intermediate ship," citing as one reason an expression of urgency from the President's Science Advisory Committee (PSAC). Why this top-level advisory body should have felt urgency in this matter is not clear, but technological spectaculars—such as the manned lunar program suddenly announced by Kennedy a few months earlier—had become a highly effective technique for providing a financial uplift for all fields of science and technology, and possibly PSAC regarded Mohole as a master key for opening the treasury to all the earth sciences. In any case, both the White House and AMSOC's own drilling panel said the "ultimate" ship should be the next step. But not long before, Roger Revelle, one of the charter members of AMSOC, had gone before a congressional committee to testify that he would "divide the drilling into parts." He would "drill a lot of holes through the sediments . . . several hundred holes. . . ." And he would drill the Mohole.

Against the background of divided opinion, AMSOC judged the "intermediate-ultimate" question. It strongly recommended that an intermediate drilling *program* be undertaken in the coming fiscal year, and it stated that it based the $4,250,000 budget on the assumption that an intermediate *ship* would be employed, but then, in open disagreement with its hired staff and in apparent deference to the views of the drilling panel, it went on to state that it might be possible to skip building an intermediate vessel and go directly to the construction of a deep-drilling ship. How was this question to be resolved? AMSOC's answer was that the decision is "contingent upon the findings of the Drilling Techniques Panel working jointly with the AMSOC staff, and eventually with the prime contractor." Thus confusion and dissension, already well sprouted, were coming into bloom.

Ten days after AMSOC had formulated these recommendations and statements of intention, Academy President Bronk forwarded them to NSF with an accompanying note of approval. "In connection with the proposed transfer of the staff," he wrote, "I am glad to record my own admiration, and that of our Division of Earth Sciences and our Governing Board, for the exceptional performance of Mr. Willard N. Bascom and the staff members. . . . In our estimation, this group has been chiefly responsible for the successful carrying out of an undertaking that represents not only a scientific advance of unusual significance but also a distinguished engineering achievement and a major extrapolation of previous practice and experience." At this point, as the summer of 1961 approached, all the signs were bright. But, in fact, Project Mohole was directly enroute to political disaster.

[The next section of the essay details how the Mohole Project ran into political trouble, first, in the selection of a contractor for the drilling of the hole, by substituting the Brown & Root Company (which had a very sketchy proposal and no experience) over more experienced companies, allegedly to gain favor with Congressman Albert Thomas who had power over NSF appropriations and had Brown & Root as a constituent; secondly, in the resignations from AMSOC of many AMSOC members who joined firms which wanted to do the Mohole Project; third, through changes in the Mohole plans in AMSOC and Brown & Root; fourth, through congressional concern over political favoritism in the contract-letting and incompetence in the contracts; and fifth, through AMSOC's decision to do battle for a two-stage drilling of Mohole with two ships. This movement toward disaster reached a high point when the American Miscellaneous Society's new chairman, Hillis Hedberg, developed testimony for the Congress which appeared to attack NSF's position and Brown & Root, and seemed to place the National Academy of Sciences in a position of disagreement with NSF.]

. . . . Leland J. Haworth [director of NSF] upon Waterman's retirement [as director of NSF] had the misfortune to inherit the Mohole controversy. The political realities surrounding the Foundation were such that he [Haworth] could not ask Congress to end the controversy by providing funds for both camps. However, Haworth's solution, as had been the case throughout Mohole's contentious history, was to blur the issues. Appearing late in November 1963 before a special session of the Senate Appropriations Committee, he proposed that Brown & Root be permitted to proceed with the design and construction of the ultimate platform, but that the equipment on that platform be "something less than the ultimate drilling equipment." The big platform, with the less-than-ultimate equipment, he said, would be used in an intermediate drilling program that would help develop equipment and techniques for drilling to the mantle. Independent of this, he went on, he favored what he called a "supplementary drilling program" that would not be a part of Project Mohole, though it might be carried out under the direction of AMSOC.

However, the break between NSF and the AMSOC leadership was now complete. Appearing before the same congressional committee, Hedberg proclaimed that "personally I would far rather see this project killed where it now stands than to see it carried out in a manner not worthy of its potentialities. . . . I have been told by some . . . that Congress and the public have been sold on the project as 'a hole through the Moho and that only,' so that is what it must be. This appears to me to be a most disappointing explanation, with its implication that the Congress is unable to think for itself." Hedberg, in a fiery mood, went on to assert that whatever the initial scheme might have been, it should now be recognized that the project should proceed in a step-by-step fashion, collecting information and experience along the way, before attempting to go on to the ultimate objective. ". . . It is not at all inconceivable," he warned, "that early results may indicate that there is either no need or no possibility of drilling to supposed Mohole depths, in which case it would have been a reckless disregard of taxpayers' money to have prematurely or needlessly built the huge vessel now proposed for Mohole drilling." The cost of using the ultimate platform for intermediate drilling, he estimated, "would alone amount to enough to go a long way toward paying the cost of the intermediate vessel." Hedberg concluded with a blast: "The initial false glamour of the Mohole idea is wearing off in the face of realities, and I am sure that the informed public now finds a much greater appeal in a broad sensible program of crustal investigation carried on at a moderate rate rather than in a crash Mohole stunt."

In conventional politics, Hedberg's forceful rhetoric would probably have elicited no great notice, but the AMSOC chairman was not engaged in conventional politics; rather he was engaged in science politics, in which a primary rule of conduct is decorum before the nonscientific world.

Two days after Hedberg's congressional appearance, he was in receipt of a letter from Academy President Seitz, which opened with a deceptively cordial "Dear Hollis," and then went on to convey a frosty rebuke. "It appears that at some time in the last month," Seitz wrote, "you sent Dr. Haworth a letter on Academy stationery spelling out the Academy's policy on the Mohole Project as you see it, without first clearing the letter with me. Had you discussed the letter with me, I probably would have asked you not to send it without having it reviewed by the [Academy's] Council because I understand it contained admonitions concerning what you would say in public if your point of view was not followed in detail by Dr. Haworth in his future negotiations regarding the Mohole program." Seitz then proceeded to chastise Hedberg for his congressional testimony, accusing him of presenting "your personal views concerning the course of the Mohole Project . . . as if they might be the official views of the Academy. . . . Whatever the merits of your point of view may be," Seitz continued, "I feel it was improper to present such formal testimony to the Congress without clearing your proposed testimony with me so that I might have referred it to the Council of the Academy if I considered such a step wise." The testimony, Seitz wrote, did "not give adequate recognition to the nearly superhuman effort the new director of the National Science Foundation has been making to find a workable compromise among the various controversial points of view regarding the Mohole." And then, the ultimate revelation of Seitz's chagrin: "Your testimony serves to make his already difficult task much harder and hence, in my opinion, reflects badly on the Academy as an advisory organization. . . . AMSOC has benefited in stature from the fact that it is part of the Academy and must expect to live within a framework of conduct designed to protect the reputation of the Academy."

Accompanying this admonition was a delicately phrased but unmistakable ultimatum: "I would like to inquire if you, as the current chairman of AMSOC, are prepared to assure me that henceforth you will not communicate with any organization or agency outside the Academy . . . on matters of major policy regarding the Mohole Project without first consulting me. . . . Unless you can assure me on this point, I will have no choice but to request the Council to permit me to reconsider your own status as chairman of AMSOC."

Seitz's letter elicited an angry response from Hedberg—on Academy stationery. Submitting his resignation as AMSOC chairman, effective immediately, Hedberg told the Academy president that "I cannot help but find your letter not only inaccurate but most unfair and misleading in the impression it gives." He described as "patently ridiculous" Seitz's assertion that his letter to Haworth should be interpreted as "spelling out the Academy's policy on the Mohole Project." The letter to Haworth was necessary, he said, because Haworth was unable to see him prior to his congressional appearance. Hedberg said he had marked the letter "Private and Confidential" and had not distributed any copies, even to the AMSOC staff. He added, however, "I must assume that you saw the letter, even though you have recently asked me for a copy," to which he added that he had advised Seitz's office of his intention to respond to the congressional invitation to testify, but that Seitz was preoccupied with preparations for the Academy's centennial observation. Hedberg concluded, "It seems to me that the stature of the National Academy and its reputation is vitally tied to the freedom with which its members may express themselves on matters of scientific import. . . . I also trust that some of the hysteria which seems to be surrounding this Mohole Project will soon be dispelled under wise leadership by you and Dr. Haworth."

Two years before, Mohole had lost the services of the Bascom group, which had brilliantly carried out the first phase of the project; now it lost the services of Hollis D. Hedberg, who, despite his acerbity, had done more than anyone else in that strange cast of characters to clarify the muddled thinking that had characterized Mohole from its day of conception. To proceed with the venture, it had become necessary to jettison some of those very few people who had the ability and foresight to make Mohole work.

[The remainder of the essay details how Project Mohole lost its final few friends by a revelation that Brown & Root had contributed $23,000 to the President's Club, a Democratic fundraising organization in the middle of the controversy over Mohole, and after President Lyndon Johnson had made special requests that it be rescued and funded by the Congress.]

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Supplementary Essay II

The Role of the AIBS in the Biological Sciences Curriculum Study*

By Arnold B. Grobman

[The essay which follows was published in 1969 as part of a history of the Biological Sciences Curriculum Study. It may suggest why, in some cases, the intervention of discipline-oriented professional societies in school curricula has been, as we have suggested above, insensitive to audiences and to the public interest. The author was director of the Biological Sciences Curriculum Study from 1958 to 1965. The essay outlines the complex motives which led such organizations as the American Institute for the Biological Sciences to become interested in curriculum reform in the schools and in the education of teachers in the late 50's and 60's. It also adumbrates, implicitly, some useful procedures for auditing the handling of funds in professional organizations receiving federal support and for public interest auditing of their relations with the federal government and with constituent groups. Interestingly, the AIBS became stronger when it depended on individual memberships and achieved a more democratic structure. Perhaps if it had had these earlier, it would have sponsored the Biological Sciences Curriculum Study with a clearer public interest motivation or stayed clear of the schools altogether.]

At the close of World War II, the dominant and prestigious professional scientific organization in the United States was the American Association for the Advancement of Science with a membership embracing all fields of science. The AAAS, a very effective and significant organization, has long been a potent force in American science and continues so today.

There were comparable groups for most of the major scientific disciplines in the late 1940's. Thus the nation's chemists were members of the American Chemical Society; the geologists, the Geological Society of America; and the physicists, the American Institute of Physics. For biology, however, the situation was quite different. Biologists did not belong to a major national discipline society as did the physicists, chemists and geologists but, instead, had organized themselves into thirty-five to forty national societies

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*From *The Changing Classroom:* the role of the Biological Sciences Curriculum Study (Garden City, New York: Doubleday, 1969).

in an almost bewildering array of groupings each of which was devoted to a specific area within biology. Thus there was a society devoted to genetics whose members had a professional interest in problems of heredity. At the same time there were botanical and zoological societies and some of the members of the botanical society had a professional interest in the heredity of plants and some of the members of the zoological society had a professional interest in the heredity of animals. Furthermore, there were societies devoted to the study of ferns and of birds and of insects, some of whose members might be quite interested in problems of genetics related to those kinds of organisms. A society was also being formed for the study of human genetics and another group existed that was interested in genetics as it related to agriculture. In this way many societies, some fairly large and some quite small, were focused on areas of interest that largely overlapped and it was quite difficult for a non-biologist to know where to turn if he wished specific information from a professional society.

Five or six of these societies, with an orientation toward physiology and medical science, had grouped themselves together to form the Federation of American Societies for Experimental Biology. This is a successful organization that serves its member societies well. It has prospered under prudent management and adequate financing from the relatively affluent (for the biological sciences) member societies. The remaining approximately three dozen national biological societies had not been organized into a super society other than through the affiliation some of them enjoyed with the AAAS.

The only occasion when representatives of many of these latter societies met together was at annual meetings of the Division of Biology and Agriculture of the National Research Council. At those meetings the representatives of the individual societies had an opportunity to discuss matters of common interest. For a number of years the idea had been expressed that these societies might form an independent organization to represent biologists rather broadly as the AIP, ACS, and GSA did for the physicists, chemists and geologists.

A number of biologists felt it was particularly important for such an organization to be developed for a whole host of reasons including, but not restricted to, the problems of adequate representation of biologists in Washington where they could be in close contact with national granting and policy agencies. Such an organization, the American Institute of Biological Sciences, finally was organized in 1947 under the auspices of the National Research Council. In 1955, with a supporting grant from the National Science Foundation, the AIBS established itself as an independent organization with Dr.

Bentley Glass as its first president.

As a legacy from the National Research Council, the independent AIBS was governed by a board consisting of one representative from each member society in addition to the usual officers of an organization. For part of the life of the organization there were a few members-at-large on the governing board but the representatives of the member societies have always dominated the board. I believe that the structure of the governing board had built within it from the start the seeds of disorganization for the AIBS as will be discussed in the paragraphs below.

In the first few years of the independent AIBS, the presidents served two- or three-year terms and so were able to become relatively familiar with the operations of the organization before their terms of service as chief executive were completed. By 1961 the AIBS changed its procedures so that its presidents would serve annual terms. Thus the AIBS would be able to bring more persons to the presidency and it might expect less day-to-day leadership from the president. Apparently some members felt that in this way distinguished biologists, otherwise unavailable, could be recruited to serve as presidents and that their prestige would reflect favorably upon the organization. It is fortunate for the AIBS that none of its annually elected presidents were content to serve simply as figureheads. Some were to devote far more time, effort and energy to the organization than they had dreamed they would at the time of their selection.

During its early years as an independent organization, the major activities of the AIBS were the convening of annual meetings and the publication of a journal. When Dr. Hiden Cox became Executive Director in 1955 (he had served earlier as assistant to the director) there began a remarkable growth in the AIBS. Dr. Cox and his associates were successful in obtaining support from foundations for projects to be undertaken by the AIBS with the result that acquaintance with the organization increased among officials in Washington and elsewhere throughout the country. For the majority of the rank-and-file biologists, however, the AIBS still meant little more than annual meetings and a journal. As the grant-supported projects increased in number and size, the AIBS staff in Washington grew with them. The financial structure of the organization became quite disturbing to Dr. Cox and in the latter half of the decade of the 50's, he would present the problem to the AIBS governing board. As a member of the board during some of those years, I remember his explanations along these lines:

Each member society of AIBS pays annual dues to AIBS in the amount of one dollar per member (earlier it had been fifty cents) up to a certain ceiling. Thus the AIBS has available something in the neighborhood of $20,000 for operating the organization. There are other AIBS incomes, such as those derived from advertising in the journal and from a few other minor sources. For an organization that does nothing more than conduct annual meetings and produce a journal this would be sufficient. But the AIBS is engaged in many projects of great interest to biologists generally that are being supported by grants. Each of these grants carries an overhead allowance for administrative expenses. For the larger grants from the National Science Foundation this allowance amounts to 15 per cent of the grant itself. Since AIBS administrative expenses for operating these grants are approximately 10 per cent, the extra 5 per cent of overhead is income to the AIBS that allows it to plan for future projects and to provide other services for which specific operating funds are not available.

Dr. Cox continued to explain to the governing board that this was a completely unstable situation and that biologists could not expect to maintain an organization for $20,000 a year that actually costs many times that amount to operate. For one thing, the level of services would collapse if the AIBS did not continuously obtain grants of comparable or increasing size. This collapse obviously was a very real and present danger. For another thing, some of the funding agencies were indicating that they were no longer going to award overhead payments on a flat percentage but would pay an overhead allowance for administrative costs in a negotiated amount after an audit had been conducted to determine exactly what the actual administrative costs had been. In other words, the NSF intention was to pay for the actual administrative costs rather than a percentage fee. If this were to happen then the AIBS would be in a deficit operation because it currently was providing more services to members than the members' dues could purchase.

Year after year the reaction of the AIBS governing board members was the same after listening to this kind of discouraging presentation. One governing board member would rise to say that he was very sympathetic with the AIBS's problems and could appreciate the difficulty in which the organization found itself. However, he would add, he was sure that the members of his particular society, whom he was representing on the governing board of AIBS, would not be willing to have their dues raised and if this should become necessary, his society certainly would withdraw from the Institute. One after another of the governing board members would rise to make a similar kind of statement and then the board would vote to maintain the membership fees at the same rate.

A fundamental matter at the heart of the problem was that the AIBS governing board members were selected by the individual member societies (either by election or through appointment by the president) to represent the interests of the societies on the AIBS governing board. Virtually all of the representatives felt that their primary loyalties were to the specific member societies that selected them and not to the AIBS. In fact, some of them came to governing board meetings with clear instructions that they were to serve as watchdogs to see that the AIBS services reached their particular members fairly and that their members were getting their money's worth. With rare exceptions, governing board members did not take the view that their primary responsibility on the board was to work for the welfare of the AIBS, representing biologists generally, over their responsibilities to their individual societies.

At the end of such board meetings individual representatives would congratulate Dr. Cox for the fine job he was doing in increasing the activities of the AIBS and would urge him to keep the grants coming. They would say how sorry they were that their societies were not in a position to carry a greater part of the weight of supporting the organization but, they would add, Dr. Cox could understand how this was. Then, it would seem, they would go home to forget about the AIBS until the next meeting of the board.

An additional weakness in governing board representation resulted from the desires of the member societies to economize on travel funds. Accordingly governing board representatives often were selected from among those members who lived in the Washington area (or in the vicinity of the site of an annual meeting), thus greatly restricting the range of selection of representatives by the societies.

Other difficulties were building up for the AIBS during the late 1950's and early 1960's. The business manager of the organization, Mr. Fletcher Campbell, an industrious and capable young man, died unexpectedly and during the critical period that followed the AIBS employed a series of men in that post, each of whom remained for only a very short period of time, until Mr. Charles Ossala assumed the position in the fall of 1962.

A procedure that was to contribute greatly to the difficulties lying ahead was the fact that the AIBS monies were kept in a general fund. Thus, with executive committee approval, income from all sources, including income from various grants, would be deposited into this general fund and from it would be drawn monies to cover the expenses of various AIBS activities.

This commingling of funds produced a potentially explosive situation. One of the AIBS activities was the Film Series which was designed to be a program in which 120 half-hour films would present biological instruction for tenth-grade students. The plan was that this series would be prepared quite rapidly and so would be available for schools to use while the BSCS was making a critical and long-range study of biological education at the secondary school level.

One of the initial features of the Film Series was that its director, Dr. Burr Roney, would serve as the continuing instructor. He would be assisted by a series of consultants for various subject-matter areas and would serve as the on-film teacher. The Film Series was supported by grants from the Ford Foundation and the Atomic Energy Commission in an amount of approximately $250,000. The project was beset with many difficulties and it took far longer to produce the films than had been planned. Very early in production, expenses were running considerably ahead of estimates. As difficulties in the series mounted, Dr. Roney disappeared and he has never been heard from again. Some time prior to his disappearance, the responsibility for the Film Series was transferred to Dr. Robert Leisner, a staff member of AIBS who had been associated with the series. The direction of the Film Series then was altered so that instead of having one continuing teacher there was a series of master teachers for each section of the course. Costs rose appreciably.

In the meantime, in Boulder, the BSCS had been selling thousands of copies of its second preliminary edition of the Versions and income from these sales were held temporarily in special bank accounts in Boulder. At intervals these funds were transferred to the AIBS general fund in Washington where they were to be held in escrow pending return to the National Science Foundation.

During the first half of 1962, about $200,000 of BSCS escrow monies had been deposited in the AIBS general fund and a like amount had been withdrawn from that fund to finance the Film Series. Apparently there was no actual cash deficit in AIBS because funds from the sale of the experimental editions of BSCS books had been deposited in about the same amount as had been spent beyond allocations by the AIBS for the Film Series. However, the deficit was real because the funds from the sale of the BSCS books should have been held by AIBS in a separate escrow account for eventual return to the NSF.

The next item of significance in this chain of events occurred later in the year when the NSF notified the AIBS that NSF auditors would be visiting the AIBS offices within the next few months to make a routine audit of those sections of AIBS records covering NSF grants such as those for the BSCS and certain other NSF projects. The NSF auditors expected to arrive in the AIBS offices in the fall of 1962. (An excellent account of this action and what followed is given by Daniel Greenberg in *Science* in early 1963.)

The chronology is interrupted here and we return to 1958 to pick up another thread of the story. At that time the AIBS had a very active Education Committee under the chairmanship of Dr. Oswald Tippo, then of Yale University. Dr. Tippo and his Committee demonstrated an interest in the problems of secondary school biology to a degree that distinguished them from many of their university colleagues. With the enthusiastic leadership of Dr. Tippo and Dr. Cox, successful proposals were made to establish the AIBS Film Series and the BSCS as semiautonomous studies. Each was to have its own policy committee (in the case of the BSCS, a Steering Committee) and was to maintain some kind of loose liaison with the AIBS through the AIBS Education Committee.

At the termination of Dr. Tippo's chairmanship of the AIBS Education Committee in 1960, there appeared to develop an attitude of indifference about the BSCS program on the part of the AIBS Education Committee. Despite repeated specific invitations to attend BSCS Steering Committee meetings, the Chairman of the Education Committee rarely came. It is hard at this late date to determine what factors were responsible for this change in attitude but perhaps three were involved.

The first might well have been related to the change in membership of the Committee. A second factor might have been that the BSCS was well launched and so the Education Committee felt it should now devote its attentions to other projects. And a third factor might have been that the Education Committee was in the process of establishing a college study, the Commission on Undergraduate Education in the Biological Sciences (CUEBS), and was finding this far closer to the interests of the Education Committee members (most of them college biologists) than the high school curriculum project. In any event, although invitations, reports, books, and memoranda were sent from the BSCS to the AIBS Education Committee, these communications gradually came to move along a one-way street. With mounting AIBS difficulties, relative success of the BSCS program and delays in initiating a CUEBS project, the disinterest of the AIBS Education Committee in BSCS appeared to have developed into a relatively negative attitude.

The financial relationship between the BSCS and the AIBS was complicated. As soon as headquarters for the BSCS were established in Boulder in 1959, I asked Mrs. Margaret Sterling to maintain financial records for the BSCS. Although she had had prior bookkeeping experience, she felt her experience should be supplemented and she enrolled in accounting courses in the University so that she would be able to maintain our records more effectively.

The AIBS, on several occasions, suggested that it was unnecessary for the BSCS to maintain financial records in Boulder since these simply would be duplications of records being kept in Washington and so represented an unwise expenditure of our funds. Our reply included the observation that at the end of each month, when we compared AIBS and BSCS records, they did not balance and adjustments were always necessary. We recognized that keeping duplicate sets of books was an additional expense but we were unwilling to give up the maintenance of records in Boulder until there was better agreement with the records in Washington. We did agree to close down the BSCS bookkeeping operation after the BSCS records and the AIBS records were in complete agreement for a period of three consecutive months. Since such matching never was achieved we continued to maintain independent fiscal records in Boulder. (At the time of the NSF audit of BSCS and AIBS books in Boulder and in Washington in November of 1962, it became quite apparent that the decision to maintain separate fiscal records in Boulder had been most fortunate.)

Almost every month it was necessary to negotiate with AIBS about charges made in Washington against BSCS funds for services not requested by the BSCS. After appropriate negotiations, these matters were satisfactorily resolved. Representations were made to the AIBS that it not permit expenditures against BSCS funds by Washington staff without prior approval by the BSCS in Boulder, but this control over the use of BSCS funds was never provided.

Dr. Cox felt that BSCS staff members were demonstrating a negative attitude toward the Film Series and he believed it to be such a serious matter that he made a special trip to Boulder to discuss the situation with me. Some of our consultants were making derogatory remarks about the Film Series, Dr. Cox told me, and he felt this should be stopped because the consultants were, after all, employees of the AIBS and the Film Series was an AIBS project. I told Dr. Cox that I would be willing to instruct our consultants not to initiate discussions about the Film Series at public meetings but that I would not be willing to deny them the opportunity to answer any questions, as they felt best, that might arise at such meetings. It might well be an infringement on the academic freedom of our staff not to permit them to enter into free conversations about the Film Series if the conversations were initiated by another person. The philosophical point at issue was that the Films represented a didactic method of teaching whereas the BSCS consultants were committed to, and enthusiastic about, an inquiry approach to instruction in biology.

A few months later I saw Dr. Cox in St. Louis at a planning meeting for CUEBS. I told him that the BSCS was running low on funds and that the next grant from the NSF was long overdue. NSF had already negotiated budget revisions with us but advised that its funds from Congress were delayed and so therefore it would have to delay its grant to us. I suggested to Dr. Cox that one possible solution to this problem would be to request the National Science Foundation for permission to use the escrow monies from the sale of BSCS books, which had been deposited with the AIBS in Washington, until the NSF was able to supply our next allotment. When that was done we could then reimburse the escrow account. It seemed to me, I told Dr. Cox, that the NSF might be willing to authorize an arrangement of this sort since it would save general embarrassment on the part of all parties concerned. Dr. Cox told me that he could not agree with my suggestion, and I was quite puzzled by his reaction at the time, for it seemed like a simple solution to a very pressing problem. I did not realize then that the escrow funds had already been spent for the Film Series and so were not available for the purpose I suggested.

Thus I was surprised, but perhaps should not have been, by a series of frantic phone calls and telegrams between Washington and Boulder during the Thanksgiving holiday period of 1962.

The NSF auditors apparently found the fiscal records of the BSCS in Boulder satisfactory and no representations were made to the BSCS with suggestions that any major changes in financial management be instituted.

In Washington, however, the NSF auditors discovered the commingling of funds by AIBS. The NSF Controller, Mr. Aaron Rosenthal, took the position that individual grant funds should have been segregated and it was improper for NSF funds allocated for one purpose (BSCS) to be used by AIBS for another purpose (Film Series). Since the AIBS did not have reserve funds, which could be used to replenish the escrow monies due the NSF, it was on the verge of bankruptcy.

The story broke in the *New York Times* on December 4 and the NSF requested the AIBS to spend no further monies unless approved by an NSF representative. There had been frantic maneuverings before the story reached the newspapers and the Thanksgiving weekend of 1962 was the most harrowing one I have ever spent.

One of the telephone calls from the AIBS instructed me to withhold delivery of the completed version manuscripts to the textbook publishers, the intent being that the AIBS would use the control of the manuscripts as a lever in its confrontation with the National Science Foundation.

On November 28 I received a telegram from Dr. John Olive, Deputy Executive Director of AIBS, "to cease all operation . . ." I regarded compliance with that directive as being totally out of the question. It seemed to me that the *raison d'être* of the BSCS–the purpose for which several million dollars of public monies had been spent–was to produce textbooks for the schools. To stop at this critical point, when the Writing Conferences were concluding their work and materials were beginning to be set in type, was completely untenable. I felt BSCS responsibilities to education were far more important than any other consideration and I alerted the Version supervisors about the situation since none of us wanted any complication to develop that would prevent us from getting our books ready for the schools.

The National Science Foundation apparently came to a similar conclusion for on the same day that I received the telegram from Dr. Olive, Dr. Keith Kelson, then Deputy Assistant Director, Division of Scientific Personnel and Education of the Foundation, and Mr. Rosenthal appeared in Boulder for discussions with the administration of the University of Colorado. Later in the afternoon Dr. Kelson advised me that the Foundation would not be able to make further funds available to the AIBS for its projects until the matter of AIBS fiscal responsibility was established to the satisfaction of the NSF. Meanwhile, the Foundation had made arrangements for the University of Colorado to assume financial management of the BSCS in place of the AIBS. The NSF had been encouraged to this action in support of the continuation of the BSCS by Dr. James Ebert, then President of AIBS, and other influential persons.

This action by the NSF was timely indeed, being taken on the same day that instruction had reached us from the AIBS to cease all operations. (It must be added that some years later we learned that the instructions from the AIBS office to withhold the manuscripts from the publishers were rescinded at the first AIBS Executive Committee meeting held after those catastrophic days.)

My reaction was mixed; I was, of course, pleased that arrangements had been made to continue the funding of the BSCS without serious interruption, but I was deeply disturbed that such arrangements had been made without a representative of the BSCS being a party to them. Though the decision made may have been the best one possible in the emergency, reassigning the BSCS as if it were a piece of inanimate property, without consulting any of its officers, seemed to me to be most unfortunate.

The following day the NSF sent a telegram to the University of Colorado authorizing it to meet the BSCS payroll, to pay for obligations being incurred by the BSCS, and to handle other fiscal matters.

By the middle of December 1962, through the careful efforts of the University Treasurer, Mr. Leo Hill, and his associates, BSCS and the University of Colorado fiscal procedures were sufficiently aligned so that the BSCS could continue to function relatively normally.

Because of this devastating upheavel, the BSCS was thrown into a situation for which it had not prepared itself. Now, for all practical purposes, the BSCS was a virtually autonomous organization with a limited relationship to the University of Colorado whose responsibility was restricted to fiscal management.

There was a long recovery period for the AIBS beginning in 1963 during which management of the day-to-day operations was placed in the hands of a group consisting of the president, Mr. Charles Ossala, and the Acting Executive Director, Dr. John Olive. (Dr. Cox had resigned to accept a position as Research Coordinator at the California State College in Long Beach.)

Over the ensuing years a number of changes were made in the organization of the AIBS and greater emphasis was placed on individual memberships (at $10 per person). A drive was made for funds and the central office operations were drastically reduced. Dr. Ebert and Dr. Paul Kramer, President during 1964, played important and unique roles in preserving the AIBS as an organization in part through effective negotiations with officials of the National Science Foundation and various other appropriate groups and agencies in Washington. The AIBS gradually was able to begin paying off its debt to the National Science Foundation. It sold its interest in the AIBS Films to the producer, McGraw-Hill; it encouraged a number of biologists to become life members of the organization at dues of $250 each; and it successfully solicited contributions from its members. By 1965, AIBS had about twelve thousand individual members, had attained a balanced budget and was conducting a limited program although it still had a substantial indebtedness to the NSF.

During this recovery period, the relations between the BSCS and the AIBS steadily deteriorated. There were five men who had been extremely influential in both AIBS and BSCS affairs. Dr. Dickson, Dr. Glass and Dr. Went, all presidents of the AIBS, had aided the BSCS in a variety of ways. Dr. Dickson had been extremely active in the BSCS international program and was primarily responsible for its initiation. Dr. Glass had become the Chairman of the BSCS and had functioned in a variety of other capacities, as a member of Version writing teams, as a writer of Block, and in many additional important ways. Dr. Went had been a member of a Writing Conference and also had been a member of the BSCS Steering Committee. Dr. Cox, who had been Executive Director of AIBS and had been instrumental in the establishment of the BSCS, had attended Steering Committee meetings rather regularly and had been active on the BSCS Publications and International Cooperation committees. Dr. Tippo, who had been Chairman of the AIBS Education Committee which had recommended the creation of the BSCS, shortly thereafter became Provost of the University of Colorado and played an important role in the growth of the BSCS there. The reason for mentioning the associations and interests of these particular men is because bv the time the AIBS recovery period started, none was any longer in an influential position in AIBS councils. Drs. Dickson, Glass and Went were no longer on the governing board. Dr. Tippo's term as Chairman of the Education Committee had expired and Dr. Cox had resigned the Directorship.

During the recovery period the AIBS profited from the leadership of a series of very capable presidents, but none previously had had close contact with the BSCS. As they assumed their AIBS responsibilities, some immediately became too deeply involved in the AIBS problems to be able to devote any attention to the BSCS. To others, the BSCS was a project located in a remote place dealing with high school education, a program not of special interest to them.

I am sure that the impact of this change in the leadership of AIBS was not fully comprehended by the BSCS in early 1963. The members of the BSCS Steering Committee had a feeling of strong attachment for the AIBS and were under the impression that the AIBS leadership had a great professional interest in the BSCS. The Steering Committee of the BSCS expressed its desire to maintain an association with the AIBS and announced that it hoped that the AIBS would be able to reassume management of the BSCS at the earliest possible moment.

Disillusion set in rather slowly. It was obvious that those in charge of day-to-day operation of the AIBS were not especially interested in the intellectual activities of the BSCS or they had no time for them. The new AIBS presidents and chairmen of committees were not people who had had any direct association with the BSCS nor did they appear interested in trying to establish such connections. Their obvious job was to help the AIBS regain a position of responsibility in the scientific community.

The members of the BSCS Steering Committee apparently did not appreciate that situation fully and continued to express confidence in the AIBS as an organization and as a proper sponsor for the BSCS. In this spirit, many members of the BSCS Steering Committee contributed substantial sums to the AIBS and a number became life members of the organization.

By the fall of 1964, the AIBS felt it timely to discuss with the BSCS resumption of management of BSCS by AIBS. In response, the BSCS Executive Committee invited the Executive Committee of AIBS to meet with it in Boulder in October, 1964, on the occasion of a regular meeting of the BSCS Steering Committee. It became clearer and clearer as the meeting of the two Executive Committees progressed that the members of the AIBS Executive Committee had virtually no interest in the secondary school biology programs of the BSCS and that they did not intend to make contributions to the professional development of those programs. However, they did express considerable interest in AIBS management of the BSCS even though they had no suggestions as to how that should be implemented. It became apparent to members of the BSCS Executive Committee that the AIBS leadership considered the BSCS as little more than a valuable property and that professional interest in the BSCS program was minor. The AIBS seemed interested in managing the BSCS, controlling the copyrights and, possibly, receiving the royalties but it indicated little interest in providing any kind of educational leadership.

A separate meeting of the BSCS Steering Committee was then held (following the joint discussion of the two Executive Committees) and at that meeting the BSCS Steering Committee faced the now obvious facts and voted unanimously against resumption of management of BSCS by AIBS at that time.

In the meantime, the AIBS kept presenting its interest in management of the BSCS to the National Science Foundation, which felt it should give the AIBS's wishes every possible consideration because the AIBS had been the initial grantee. In response to the charge that the AIBS was unable to provide appropriate educational leadership, the AIBS declared that it would locate an Educational Director of the very highest stature who would join the AIBS staff in Washington and provide the necessary leadership for the BSCS, CUEBS and various other educational activities in biology. Funds from a private foundation for such an Educational Director had been promised and would become available when the AIBS located a man of recognized stature and he agreed to accept the responsibility. It developed that the AIBS was unable to recruit such a person on a full-time and continuing basis although it was able to recruit a highly competent person on a part-time basis for one year.

Further disintegration in relations between AIBS and BSCS developed as the squabble continued over the problems of management with no professional interest being demonstrated on the part of the AIBS as far as the BSCS could observe.

In the meantime, as has been indicated in earlier chapters, the BSCS began exploring various other methods for its management as interest in resumption by the AIBS was fading away. The BSCS considered the formation of a corporation, the formation of a consortium, management by a private university, and management by the University of Colorado. Management by AIBS was no longer desirable insofar as the BSCS was concerned.

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Supplementary Essay III

A Case Against Managerial Principles in Education

By Peter Hilton*

[The essays which have preceded have suggested the limitations that scientific professional societies have in maintaining a purely 'professional' stance when they have to act in the arenas where the battles of the politics of *pure* or *applied* science are fought. In such circumstances professional societies may appear crass, indifferent to educational issues, even dictatorial or unscrupulous. On the other hand, individual professionals, and professional societies do sometimes intervene in public school education in ways that are salutary. The essay below describes one such effort by a professional mathematician and other members of what Kuhn would call his 'paradigm group.' What is most important is that the analysis made by a mathematician is an analysis made in the area where mathematicians are specialists–that is, the uses and limits of mathematical languages. In the essay which follows, Peter Hilton describes an episode of bringing that expertise to bear on the abuse of the language of mathematics in educational management and curricula. He also describes how professionals were organized; the signatures obtained were not obtained by the AMS or the MAA but by an individual organizing other professionals–sending his 'letter to Washington' to dozens of other departments of mathematics for their signature. In this case, the work appears not to have been 'lobbying'–no one person or professional group would gain from getting out of a bad curriculum. The motive appears to have been more or less disinterested service–what perhaps should be the hallmark of professional action *vis-á-vis* schools and school curricula but too often is not. In making his point about the "true role of the content expert," Mr. Hilton is making a claim similar to that made by the professional societies who controlled the Curriculum Reform movement of the late 50's and early 60's. Unfortunately much of the force of that claim was reduced by apparently selfish or shortsighted lobbying, fiscal manipulation, and credentialling power-moves of the societies in that period. None of these activities were willfully wrong or evil; they were simply a little lacking in profundity and in a sense as to where public service ends and private interest begins. The efforts of societies representing scholarly endeavors to reform the schools are not too often authoritative (Kuhn would say that the efforts are in a pre-paradigm condition). Too often, pre-paradigm groups in the learned fields claim definitive authority for themselves. This has happened in the social sciences and the Humanities but also in some scientific areas when questions of "the discipline" were attended to but questions of "how the discipline is learned" and "which audience (consumer?) is learning it" too often went begging. Curiously Hilton *did not* turn to a professional society when he wanted to seek massive support for making an essentially professional point.]

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Appearing before a group of experts on questions of cost-effectiveness, I should begin by declaring my own interest. I am, of course, not a specialist in the fields which you represent, nor, indeed, am I a professional educator. My profession is that of mathematician, and this has the twin components of research and teaching. However, I have for very many years been concerned about questions of mathematics education and have found it necessary, in order to understand the nature of the problems involved and perhaps to contribute to their solution, to familiarize myself with the situation all the way through from kindergarten to graduate school. Thus, within the domain of education, my experience has been largely restricted to observation and analysis of the current situation with regard to mathematics education, together with some involvement in attempts to design new curricula. I believe that many of the conclusions that I have come to are equally applicable to education in other disciplines. However, while I do not even claim to be an expert in mathematics education, I would lay claim to even less competence with regard to education in other fields. I wish to emphasize this last point for two reasons. First, I would wish you to consider the generalizations of my remarks to education in other disciplines, but I would wish you to understand why I choose my examples from mathematics. Second, I have been appalled and I continue to be appalled by the willingness of some of my colleagues in other disciplines to pass judgment on programs in mathematics despite their lack of any special knowledge of the field. I hold that no man can claim to be educated if he is unaware of his areas of ignorance, and I believe that one of the major sins that a person in a position of influence can commit is to use that position in order to affect the attitudes of others towards matters which do not lie within the person's competence. Thus, with this disclaimer, let me explain the principle causes of my concern over the prevalence of the adoption of managerial principles in education. For the purpose of this discussion I will confine attention to pre-college education, though it is not difficult to discern the rise of managerialism in college education, with equally serious, and equally disturbing, consequences for the quality of education.

I have already explained elsewhere what I understand by managerial principles. Allow me to quote from a recent article:

> . . . to adopt managerial principles in education means simply that one incorporates into education the utilitarian principles which have proved successful in industry and commerce. These principles are, in simple terms, that one should state the objective, and that one should devise efficient tests to determine whether the stated objective has been achieved, or, in the case in which the degree of achievement can be parametrized on some scale, one devises tests to determine whether an acceptable level of success has been achieved. Naturally, these principles involve also the establishment of criteria of competence. As applied to education, this concept would refer both to the competence of the student and the competence of the teacher. A further ancillary notion is the concept of accountability, which, applied to education, means that the given educational system should be seen to be producing an output compatible, by some agreed objective standards, with the cost of the input—and with the needs of society.[1]

Let me elaborate on the case which I made in the article quoted against the adoption of these principles. Of course I should immediately explain that I do not maintain that one should do the opposite of what is stated in the passage quoted. I recognize, for example, that there is much validity in the concept of accountability, and that no educational system could or should proceed without constant reevaluation of the effectiveness of its *modus operandi*. My objection is concentrated on the matter of the criteria adopted and their inevitable exclusiveness. By insisting that the objectives of education must be precisely prescribed and must be measurable, the proponents of managerialism confine themselves to essentially behavior objectives, and make further restriction that these objectives must be capable of being stated in numerical form. An inevitable consequence is that, instead of concerning themselves with understanding and with the fundamental purposes of education, these people confine their attention to the acquisition of skills and to the measurement of the effectiveness of training. I quote again from the same article:

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[1] "The Survival of Education," *Educational Technology*, XIII (11), 1973, pp. 12-16.

> It is immediately clear that the application of these principles in education elevates to a paramount position the importance of the fulfillment of tasks and therefore of the acquisition of skills necessary for the fulfillment of those tasks. Thus, the attitude being attacked . . . essentially identifies education with a set of skills needed to execute certain tasks; and the procedures advocated by those who favor this attitude are concerned quite exclusively with measurable objectives and, of course, require that these objectives should be stated in advance. It is obvious, therefore, that they can take no account whatsoever of unmeasurable objectives, nor of those qualities of enterprise, initiative and imagination which produce exciting results in the educational process and which are not susceptible of prespecification nor of accurate measurement. Moreover, only instant tests of success are admitted, so that long-term pay-offs for educational investment are totally excluded from consideration.

I believe that the replacement of the concept of education by that of training is perhaps the single greatest harm done to education in this country by those professional educators and psychologists who are currently dominating the educational scene. They are strong advocates of "career education." However, the replacement of the word "vocation" by the apparently more emotionally agreeable term "career" cannot disguise the poverty of true human and intellectual content implicit in programs which deny the whole man and pander to the prejudice that the object of education is to enable young members of society to prepare themselves for activities for which they will be paid a wage. Naturally, I do not deny the importance of acquiring skill and training. Indeed, far from believing that there exists an inevitable dichotomy between education and training, I believe that the only effective way to train people today to meet the complexities of modern life, and to be sufficiently flexible to retain their market value within a context of a rapidly changing technology, is to educate them in the truer sense of the word.

Now I claim that it is impossible in principle to make any valuable instant measurements of the effectiveness of the educational process in its deepest sense. For the criteria of true effectiveness must incorporate a reference to the permanence of the effect of that education on the individual. If I want to know whether a student has understood a piece of mathematics, it is no use my simply applying a test of his ability to reproduce that piece of mathematics shortly after he has become acquainted with it. I must find out how he behaves in the years to come. Does he choose to take more mathematics courses? What is his attitude towards mathematics? What is his attitude towards education in general? Does he seek a career in which he would be likely to use that sort of mathematics? Does he, in his day-to-day life, examine the world around him in ways which are informed by the mathematical education he has received? These are, for me, the criteria. We will all agree that it is not possible in practice to apply these criteria in order to make an instant judgment of the effectiveness of a particular educational experience. Yet we must recognize that it is necessary to make fairly immediate estimates, of an admittedly provisional nature, of the success of an educational experience or an educational program. I believe that certain tests can and should be applied, within a relatively short time-interval following the educational experience itself. However, these tests do not involve measurable objectives. They should involve judgment as to the extent to which the actual learning which has taken place accords with the goals which have been set. These goals will, of course, have been developed with the full participation of the teacher; and the judgment will be largely subjective. I know of no better way to test the true quality of a learning experience than to have it judged by a master teacher and a content expert present in the classroom.

A further objection to the tyranny of tests of the attainment of objectives capable of numerical measurement is that they give the false impression that people are linearly ordered with respect to quality. If a group of students taking a course are then tested on the course and the published result of that test is expressed by means of a single number, then the impression is created that of any two students taking the course, one can say that one has benefited more than the other (or that they have benefited equally). For, unless it is indeed true that, of any two students, one is learning more successfully than the other, or even that one is better than the other, the representation of performance by a single parameter must lack all theoretical justification. I claim that, indeed, these statements of comparison are very likely to be meaningless. I would say that only where the difference between two students is so gross that no test is needed would I admit of two students that one is clearly better than the other. For the capacity to execute a complex task, whatever its nature, is an amalgam of abilities and should therefore be represented, if it must be quantified, by a vector and not a scalar. For example, it may be true that of a group of students, that Student A understands better than the other students, Student B is the best at avoiding error, Student C works the fastest, while Student D is the one who really enjoys what he is doing. The application of a test inevitably involves error. By assigning a numerical index to the result of that test, all that one is doing is superimposing an avoidable error on an unavoidable error.

A further dire consequence of the ubiquity of objective tests within our system is the inevitable distortion of the whole educational process. Since success in the tests is necessary for the further advancement of the student, the teacher teaches with the principal objective of maximizing the expectation of that success. Since the ability to do well in these tests is a most singular ability only very weakly correlated, at best, with a genuine understanding of the material, the result is that those parts of the curriculum which are concerned with real understanding will be neglected at the expense of those parts which will be tested. For example, very few students of the differential calculus really understand the nature of the process of passing to the derivative of a smooth function. On the other hand, very many more students are perfectly capable of parroting back to the teacher the derivative of, shall we say, any polynomial in one variable. The student whose competence in the differential calculus is confined to his ability to execute a few elementary techniques is extremely unlikely to utilize that skill in any significant way in his later life. Nevertheless, he will do extremely well on the tests. The student who is really concerned about the foundations of his subject but who is subject to the artificial constraints of a test-ridden educational system, will find himself positively handicapped by the context and atmosphere in which the subject is being taught.

Many of you will have seen the article by Mr. S.H. Erlwanger entitled "Benny's Conception of Rules and Answers in IPI Mathematics" which appeared in the *Journal of Children's Mathematical Behavior*, Volume 1, No. 2 (Autumn, 1973). This was a horrifying account of an extended interview of Benny by Erlwanger in which it became clear that Benny had no understanding whatsoever of the nature of fractions, although he could perform so well in the tests that his average score was over 80 per cent. What was so alarming in this remarkable case-history was not simply that Benny didn't understand fractions, but that he had no comprehension of the nature of mathematical statements whatsoever. That is to say, it never occurred to him that any understanding was involved! So far as Benny was concerned, there were rules and one simply tried to execute these rules as effectively as possible. That was the entire content of mathematics. When, for example, Erlwanger pointed out to Benny that although he (Benny) agreed that 8/10 and .8 were the same, nevertheless Benny's algorithm for adding fractions would give a different answer according to whether he was confronted with 2 + 8/10 or

2 + .8, Benny's cheerful reply was that of course the answers would look different because you were writing the fraction differently, "but really they're the same, no matter what the key says."

I have called Benny's mathematical behavior remarkable. Perhaps I should not, for I have no reason whatsoever to believe it to be exceptional. I believe that it will be decreasingly exceptional precisely as programs recommended by behavioral psychologists get increasingly adopted in the schools of this country. I have before me, for example, Working Paper No. 56 of the Center for Cognitive Learning of the University of Wisconsin. I have been told already that I have made too much play of the defects in this working paper. I wish to explain once again my point that people who believe that the items listed in this paper might be suitable for testing the level of attainment of mathematics concepts by intermediate grade children appear to have no comprehension whatsoever of the nature of mathematics. They would appear to see mathematics as a stagnant set of conceptual items and mathematical activity as the enunciation of grammatically acceptable and logically unexceptionable statements incorporating these items. Of mathematics as an *activity* there is no trace.

I do not wish my remarks to be interpreted simply as an attack on educational psychologists. However, I would be happy to be identified as one in unqualified opposition to the exclusion of content experts from decision-making with regard to education. I led a campaign in the autumn of 1972 against the behavioral approach and in favor of the restoration of the true role of the content expert in education. I obtained, within a matter of three weeks, the signatures of nearly 4,000 mathematicians to a letter addressed to the Acting Director of the National Institute of Education protesting about the trend described. As one surveys the moral disarray in Washington today, it is perhaps not so surprising that neither Mr. Elliott, the Acting Director of NIE, nor Mr. Thomas Glennan, who was appointed Director shortly afterwards, had the courtesy to reply. Evidence was available, however, that the letter was received and exerted some influence. Nevertheless, in a subsequent extensive correspondence with the chairman of the Master Panel appointed by NIE–and I should explain that the chairman corresponded with me only in his private capacity–I never once succeeded in eliciting from him any acceptance of my point that the content expert had a role to play. Indeed, although both my letters to him emphasized this point, neither of his letters to me mentioned it. Moreover, in one of his letters he referred to the nature of the testimony presented to him by members of the mathematical community with regard to a particular mathematics program which Panel D, a panel subordinate to his master panel, had deemed ripe for extinction. (Let me mention in passing that Panel D consisted of ten people, of whom one only was competent in mathematics!) The chairman of the Master Panel stated that he would have been impressed had the mathematicians consulted testified to the teachability of the material, whereas they only testified to the validity of its content. In reply I challenged him to name one mathematician who had been consulted with regard to the nature of the content. He ignored my challenge. I do not believe any mathematician was consulted with regard to the content, or any other aspect, of this or any other curricular program. I am convinced that, had any mathematician been consulted about the various programs under scrutiny, the paucity, and appalling nature, of the content of many of these programs, would have been attacked most vigorously by virtually all those mathematicians consulted. The fact is that questions of education are almost exclusively in the hands of education experts and various kinds of social scientists. I believe that we will never have a worthy educational system until we restore the proper role of the content expert. By all means, let the content expert and the education expert work side by side. But let us always bear in mind that success in inculcating wrong or worthless notions is far more disastrous than failure to educate at all. And an educational system fully achieving its stated goals, be they ever so objective, is certainly not cost-effective if those goals are irrelevant to, or even in conflict with, the true goals of an educated, civilized community imbued with strong moral principles.

THE SOCIAL SCIENCE PROFESSIONAL SOCIETIES:

INTRODUCTION

Some of the harshest criticisms of American schools and colleges which have been offered in the last two decades have been directed against those disciplines which teach about man in society—past and present. This may derive partly from the fact that the methods of most of the social sciences have not achieved the consensual approval accorded the methods of most of the physical sciences during stable periods. (Kuhn calls them pre-paradigm sciences, and Toulmin gives them similar labels.) Given the fragile scientism of modern conventional social science, it is not surprising that "movement" efforts to alter the schools have generally concentrated on the ethnocentrism of the conventional academic representations of the history of man, beginning with Egypt, Babylon, and Greece and moving up through Northern Europe and on to America. Alton Becker put the criticisms well:

> The image that "culture" starts in Greece, moves to Rome, up Europe, across to England, and then across the ocean to us is the dominant academic image of the "progress of culture." This picture of history and literature is one of the most harmful things which we perpetuate in our schools, perhaps the source of most of our present trouble in Asia. (Alton Becker, *The Craft of Teaching and the Schooling of Teachers*, available Study Commission.)

The original efforts to alter this sort of image commonly involved attempts to get schools to include "Black History" and "Black Culture" units in their curricula or to add "Black Studies" departments. Later similar efforts were made in some sections of the country to serve Native American, Chicano, Asian, and Eastern and Southern European interests. Concurrent with the direct pressure on higher education and common school institutions, which led to revisions in the social science curriculum, were pressures on legislators to pass laws requiring the schools to develop courses of study representing the history and culture of third world societies and establishing studies of aspects of those societies as necessary features of the teacher training curriculum. The significance of this movement to alter the school curriculum and the education of teachers lies in two facts:

(1) Substantial changes in licensing laws and curriculum guidelines were created, for the first time in recent history, by local pressures from the laity, particularly the minority laity. (Carnoy includes a history of democratic localism in earlier periods in his *Education as Cultural Imperialism.*)

(2) The pressures to represent new areas in the school curriculum (e.g., Pre-Columbian Central America, Renaissance Songhai) by the laity led to an expansion of professional social science research, publication, and controversy.

Perhaps the most incisive documentation of the limitations of social science teaching in the sixties was done by Jules Henry in his "Education for Stupidity"—an essay in which he shows that common school texts in the social sciences, many of them written by professional social scientists (sometimes collaborating with educators):

(1) Showed white people, not blacks or Chicanos, as primary workers on "cotton farms," i.e., plantations.

(2) Left out blacks altogether as a factor in American life.

(3) Showed 19th century strikers as the primary villains in American industrial strife, while revealing little or nothing about 19th century factory conditions.

(4) Represented "depressions" as nearly inevitable, and not particularly terrible, parts of the "business cycle" without representing possible governmental roles in creating or stopping depressions.

(5) Represented poverty only as the effect of "living on poor land."

(6) Represented the Soviet Union in one-dimensional terms apart from Czarist history or Czarist social legislation.

(7) Spoke of the dropping of the atomic bombs on Hiroshima and Nagasaki without mentioning that there were casualties or who they were or that Japan was at that time suing for peace.

(8) Represented European imperialism in Asia as the consequence of the disintegration of Asian empires and the efforts of the British and others to reestablish order.

These lacunae in 60's textbook representations of history by professional social scientists lead Henry to argue that " . . . the world is presented to children and adolescents in such a way that they do not get from school the information necessary to enable them to form an intelligent opinion about the world."

Subsequent social science model curricula have altered some of the conditions which Henry describes, although it is hard to determine to what extent the different view of social reality which 70's children and youth have reflects experience with television and other mass media. Coverage by the media of certain episodes of contemporary social and political life provided a particularly complete look at some of our institutions and patterns of social behavior, e.g., events surrounding the 1972 election of the president. However, the social science professions, through their professional society offices, have also sponsored and supported projects aimed at correcting some of the misstatements and omissions which Henry called attention to. And, in 1969, the professional societies reported themselves ready: to get to work on "black history reevaluation and training of history teachers" (History); to use political socialization research to assist the schools in helping young people learn about politics, bureaucracies, and school politics (Political Science); to do research and education on the "structure and functioning of school systems" in view of the crisis in education and to expand efforts related to understanding the 60's crises in the classrooms and in the streets (cf. *Five Levels of Incompetence,* report of the 1969 Grove Park Institute, available Study Commission). Few of the good intentions expressed at Grove Park subsequently received embodiment in action, partly because the Office of Education did not fund much of what was proposed there and partly because the professional societies themselves did not follow up on much of what they proposed where they could have done so on their own. However, such efforts as those of anthropology's "Culture and Society" project (backed by the American Anthropological Association's Council on Anthropology and Education), the Indiana University history project, the American Political Science Association's "Committee on Pre-Collegiate Education," and sociology's "Committee on Teaching Undergraduate Sociology" may encourage schools to cover, to some degree, areas which Henry found to be "left out," consciously or half consciously, when he wrote "Education for Stupidity."

However, part of what Henry describes as "education for stupidity" may be understood as a consequence of the development of intellectual professions and professional societies. Some of these social structures spring from changes in society which create demands by social managers for new kinds of information, only part of which will be transmitted to the people who are to be managed. Most experienced persons know that there are differences between the study of society as it is commonly carried on in universities, in government, and in business, each of them studying society from a specific perspective (e.g., structural functionalism) to assist in the formulation of specific policy. The schools are different from each of these three. The school study of the social sciences seems not to articulate the specific perspective of social study (and what it omits) or the specific policy implications of what is represented. Indeed, in Henry's view, the representation is at some level designed to keep people from learning much at all. Finally, the social sciences themselves, by seeking to improve the quality of their methodology seem willing to improve their science by leaving out *more and more of the experienced social realities which cannot be described with numbers.*

Murray Wax points out, in the essay which follows, that it is characteristic of the social sciences, which all purport to study man in a social setting from their own point of view, that they overlap. And he concludes that this is not a bad thing, but rather that the gaps that do remain among such disciplines as sociology, economics, and political science are still too great. It should be encouraging, then, that many of the professional societies which represent the social sciences are making increasingly strong efforts to cooperate and thereby to advance the cause of practical social study generally, as well as their own specific fields. Executive secretaries of societies foregather on a regular basis to discuss and coordinate their activities. They consider activity in Congress which may affect social sciences in order to keep their members informed; and they provide input into federal government channels by way of testimony or even merely letters from members. Out of such attempts at cooperation has come Consortium, Inc., a sort of conglomerate of professional associations in the social sciences, which sponsors a resource and reference center, a teacher associate program, the ERIC Clearinghouse for Social Studies/Social Science Education, TRIAD (Teacher Regional In-Service Analysis and Dissemination program), and CMAS (Curriculum Materials Analysis System).

We have already adverted to another trend among the social sciences which is not nearly so laudable. There is, as Wax puts it, an unfortunate preoccupation with *precision* at the expense of *accuracy*. By this he means that there is a growing fascination with ever more sophisticated measurement and a corresponding neglect of description, conceptualization, and consideration of real but non-quantifiable problems. Robert Baker, in *Psychology in the Wry*, describes it in another way: A philosopher happened upon a scientist, busily at work in his laboratory, and asked the scientist what he was doing. The scientist replied, "I am making a device that will count grains of sand." Stunned, the philosopher inquired why he was making such a device. "Well," said the scientist, "It's hard to count grains of sand by hand." The philosopher, still somewhat puzzled, asked, "Why would anyone want to count grains of sand anyway? It is a big and endless task." "Well," said the scientist, "If nature went to all the trouble to make grains of sand, we feel the least we can do is count them." The Wax article suggests the existence among social scientists of a disturbing interest in building better and better sand grain counters, if possible with government funds. The impulse to be "value-free," to utilize "pure" or "hard" scientific methodology may be impressive on paper but it may not yield real information about a world which teachers can teach about or youth will want to learn to understand. And it may be worthwhile to question the result of the application of such an approach to curriculum design or the education of social science teachers (as Hilton questions its use in the education of mathematics teachers).

The inclination toward scientism on the part of professional societies seems to go hand in hand with the concern some of them express that they be identified as learned societies rather than professional associations, despite the obvious trend most of them display toward increasing professionalization and pragmatism. Professor Wax draws an interesting and enlightening parallel between the social sciences and Christianity to point up the tension that exists in these disciplines between purity of approach and the need for positive results, a tension adequately illustrated by the activities of the associations and their members described in this chapter.

It should be observed that school policy, insofar as it is made at all by intellectuals as opposed to politicians, has largely been made by social scientists whose concern has been for what Wax would call precision as opposed to accuracy. Until recently, the National Center for Education Statistics has done almost nothing but sample survey studies to assist policy makers; the Coleman report, which had widespread policy consequences, depended on sample survey analysis for most of its statements about problems of educational equality. And most present teacher education technology encouraged by the Office of Education has been influenced by the interest in quantifications of behavioristic psychologists and some management experts of the Taylor school. It is not clear that the professional societies have had a role in producing these propensities in government; it may be that they could serve a useful role in advocating a more *laissez-faire* use of social science methodologies (including those Wax would deem "accurate" rather than "precise") to formulate education policy.

Supplementary Essay IV
On the Social Sciences as Professions

by Murray L. Wax

The Bureaucratic Ecology of Social Science

A.L. Kroeber once observed that it was not the human capacity for creative innovation that distinguished man from the other animals, but rather his ability to transmit from one generation to the next that which has been innovated, tried, and proven valuable. I have taken this as my guide for this paper.

Let me begin with a prologue of social organization. I remind you that Sociology and Anthropology are institutional units within the system of universities and scientific societies. While there are Sociologists and Anthropologists laboring outside of the university system, still the significant shifts of policy, manpower, and organization occur within the dual context of university and scientific society. This is true not merely for the U.S. but also for many other nations where the study of Sociology or Anthropology is in progress.

Within the U.S. and within other nations which are moving along the same current of mass education as has this nation, the university system has become increasingly bureaucratic. Knowledge is assumed to be divided into fixed quanta, marked by the course, the class period, the textbook lesson, and the examination; these quanta are summable as credit-hours; and when sufficient accrue to the individual, he is certified with a degree. Plainly, that knowledge which fits best into this iron framework is dead knowledge, fixed and finished, consisting either of a body of texts composed by scholars long deceased, or of a body of hard propositions forming a closed formal system, such as Classical Mechanics within Physics.

Within Anthropology, subfields such as Physical Anthropology and Archaeology have often approximated closely to the model of the body of texts, fixed and finished, and so they have been fitted easily into the bureaucratic structure of the university. However, much of the rest of Anthropology and much of the best of Sociology have posed a more difficult exercise for the viewpoint of a systematic and logical division of scientific labor, the very existence of the disciplines or sciences that are taken to constitute the social- or behavioral-sciences makes but little sense. Sociology, Anthropology, and the various other disciplines, such as Economics and Psychology, are not the outgrowths of a systematic division of social-scientific labor, but are instead the arbitrary consequences of particular social processes. In particular, the character of Sociology in the U.S. owes a great deal to the fact that it had to push its way into the universities, elbowing room for itself against the more ancient disciplines of Economics, Political Science, and History. Sociologists had to claim that they were concerned with something other than their senior colleagues were doing, and most of them based this claim upon a concern with the social problems associated with industrialization and urbanization, particularly the problems of urban poverty, crime, and familial disorganization.[1] These kinds of social problems were worthy of detailed empirical investigation, and they had been slighted by the existing disciplines, and so they provided an intelligible field of specialization for Sociology; but, yet, from the point of view of a systematic division of social-scientific labor, this kind of differentiation among the disciplines has never made any sense. How can one study crime without studying the political machinery that defines crimes and labels men as criminals (Kitsuse and Cicourel, 1963; Eriksen, 1972)? How can one study the state without studying the ways in which people resist the claims and authority of the state? Likewise, how can one study poverty without studying the framework of production and trade in which people are poor? And how can one study the economy without studying how it is that people become and live as the poor?

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[1] Sociology in the U.S. sees itself as filiated to the pioneer studies of urban poverty undertaken by English investigators, Charles Booth, Beatrice Potter Webb, Henry Mayhew. (See the historical review by Nathan Glazer in Lerner's *Human Meaning of the Social Sciences*). The sociological studies of poverty in the U.S. have often been given an ethnic focus, whether upon the Poles in Chicago (Thomas and Znaniecki) before World War I, or the Spanish-Americans in New York City after World War II (C.W. Mills, etc.).

What I am doing is challenging one premise of the Symposium. I do not think that there are a set of scientific disciplines whose interrelationships can be discussed as Sociology to Anthropology, but rather I see a set of scientific societies who have, as a result of particular social processes, managed each to gain for itself some mandate to study the body social. In terms of a logical and systematic division of social-scientific labor, much of Sociology and Anthropology ought to be grouped together as one discipline. For example, social psychology, ethnopsychology, and psychological sociology are but one field, and the attempts to justify their disparateness are almost comic.

Yet, as social-scientists we know that logic seldom organizes social relationships, and I think we all well realize that, faced with the departmental baronies, the university monarchies, and the multi-university imperiums, no edict from the Pope of the Ford Foundation, nor even any decision of the College of Cardinals of all benevolent foundations could possibly bring into a logical table of organization our current system of university departments and scientific societies. Perhaps it is better as it now is. For, given that scholars are human beings and not instruments of inquiry, it may be best that the social-sciences are chaotically divided and that the various divisions are professional rivals for the same subject areas. The consequence may often be that a man unpopular, say, with his fellow sociologists, may receive among anthropologists the encouragement to continue his heretical endeavors. Likewise, a theory, such as psychoanalytic psychology, that infringes on the vested interests of one discipline and so is stamped as heretical, may find in a neighboring discipline the opportunity for employment and refinement. Fortunate developments like these can, however, only occur where there is a sufficient degree of overlap among the academic disciplines. Assuming this to be true, the defect of our present division of labor is not that several different disciplines are each studying the same subject matter (while giving different labels to their activity) but rather the obverse, namely that the gaps among our disciplines are much too large.

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The Little Community: A Natural Whole

For anthropology, the effects of the detachment from the more established sciences of Economics and Political Science have been especially evident in what has been the model for cultural investigation—the study of the little community (Redfield, 1960). The success of these studies has been fantastic, and one reason for this success has been that the anthropologist felt free, or even compelled, to describe every significant aspect of the life of his particular community, including its economy and its political structure. In the most successful of these studies, the ethnographer described the life within his little community as a natural whole, and this mode of presentation predisposed him to steer a delicate balance between the abstract description of reified social forms and the novelistic rendering of human beings engaged in human relationships. Yet, the anthropologist was able to perform this *tour-de-force* only at a cost, for the little community model and the research connected with it were built on a deliberate blindness—a blindness that appears very conspicuous in the accusing vision of the intellectuals of ex-colonial areas (Maquet, 1964). For, at least in his scholarship, the ethnographer chose to ignore the politico-economic linkages between the little community of his research and the great societies encompassing it. When he could not accomplish this isolation in the present, the ethnographer retreated into an idealistic past, "the ethnographic present," so that the only linkages he then needed to consider were those among little communities, rather than between his little community and greater societies. Had there been any real meaning to the social-scientific division of labor, it should have been here that his colleagues in other disciplines, and especially the sociologist, would have rushed to reprove the errors of the anthropologist. By and large this was not so. Instead, a substantial bloc of sociologists were so impressed with the success of the little community studies that they hastened to emulate them. Some sociologists proceeded to study whatever within urban society was sufficiently small and isolable to have some of the form of a little community: a prison, an asylum for the insane, a small town, or an ethnic slum; and some of the results achieved by these sociologists were extraordinarily fine (cf. Vidich, Bensman, and Stein, 1964). Meanwhile, other sociologists were attracted by the conceptual scheme—functionalism—that had been utilized by some of the more eminent anthropological students of little communities, and they have attempted to find ways by which they could apply functionalism in the study of the systems of modern, industrial and urban societies. But, in stretching and adapting the functionalist schema to cover such a systemic complexity, these theorists have necessarily had to eliminate much of the capacity for insight and understanding that had made the ethnographic study of the little community so appealing. Worse yet, some of these theorists have committed the folly of attempting to treat a huge, modern, nation state (such as the U.S. or the U.S.S.R.) as if it was but an enlarged and elaborated version of a little community, and they have had, therefore, to insist upon as normative for the nation state a homogeneity of values and norms that is both false to the facts and freighted with a conservative political bias.[2] Here, anthropologists can be useful as critics by showing the frequency with which the nation state is an ecological system, or system of societies. Cultural anthropologists are also in an excellent position to remind sociologists of the multi-national, international, and just plain non-national quality of so much of modern (and ancient) life.[3]

Ideologies of Sociology

In this essay, I have several times referred to the problem of a systematic division of social-scientific labor, but I have so far begged the question of what sort of sciences are Sociology, Anthropology, and their companions. Are they destined to follow the route of the natural sciences, for which Classical Mechanics within Physics has been the archetype, or are they some kind of enterprise–practical, humanistic, historical, moral, or philosophic (Evans-Pritchard, 1964; Wax, 1965a; Winch, 1958)? Put genetically, the issue is whether the social sciences are simply the latest representatives of that endless human preoccupation with our own and our neighbor's conduct, or whether they really did spring freshly into existence during the past century or so of Western Society and so mark the radical innovation of applying to the study of human society that master tool–scientific method. The issue is not idle, inasmuch as agencies like the National Science Foundation and the American Association for the Advancement of Science, and others, have steadily been using their influence to push social-scientists into following the model of the natural sciences. The AAAS offers annually a prize of a thousand dollars in order "to encourage in social inquiry the development and application of dependable methodology analogous to the methods that have proven so fruitful in the natural sciences." And this is quite significant, because no agencies are offering to natural scientists, physicists or chemists of what-have-you, prizes for researches that use dependable methodology; instead whatever prizes are being offered in those fields are for achieving particular results or solving particular problems. Accordingly, it must be said that if these kinds of pressure are to be taken as meaningful, they must betoken a corresponding resistance. After all, social-scientists have been engaged in research for a considerable length of time, and if they persist in using those nondependable methodologies of the "Brand X" variety, something critical must be wrong: either the social-scientists are stupid, or they are traitors to pure science and are being seduced by those well known humanistic fleshpots. Of course, it could also be that those nationally advertised methodologists aren't really that dependable--you know, any product that they have to go around paying people to use!

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[2] An interesting case in point is the contrast in the portraits of the industrial revolution in England as presented by the Parsonian sociologist, Smelser (1959), and by the social historian Thompson (1966). Concerning the possibility of a minimum wage law, Thompson (1966:300) is forced to protest, "The difficulty lay, not (as Professor Smelser has it) in the 'dominant value-system of the day,' but in the strong opposition of a minority of masters and in the mood of Parliament (which Professor Smelser commends for its success in 'handling' and 'channeling' the Weavers' 'unjustified disturbance symptoms')." Social-system theorists seem to believe that, because some elite claims to have political control over a territory, that consequently there must exist a society corresponding to the territorial base. As a result, these theorists are led to an overconcern with "the problem of Hobbes" and a general slighting of the remainder of the great tradition of political philosophy.

[3] At the beginning of this essay I noted the international character of the system of universities and scientific societies and especially of the disciplines of Sociology and Anthropology. This was not an idle comment but was made to emphasize the supranational values that adhere to the callings of these disciplines.

More seriously, I should like to point out that for well over a century social-scientists of one discipline or another have been trying to apply what they understood to be the methodology of the natural sciences to one or another area of human life. Pareto, Freud, Radcliffe-Brown, J.B. Watson, and others too numerous to mention, each thought of himself as studying human behavior in a fashion akin to the way the natural scientist had been studying the nonhuman world. Each of the men cited thought he had been successful; some of our contemporaries today continue to think of these men as having been successful. If the scientistic critics of our disciplines believe that these efforts have in fact been so inconsequential, and if these investigators represented some of the most talented, energetic, and magnetic intellects of their time, then what properly ought to be concluded? I should suggest that the proper conclusion is that the social sciences cannot be transformed into the kinds of scientistic enterprises that have been enshrined in the ideology of our critics.

One clue to understanding the kind of sciences that the social sciences are comes from their genesis. Sociology arose in relationship to the Industrial Revolution—to the growth of new and peculiar social forms. The new military technology, the new system of transportation and communication, combined with the increasing specialization and division of labor, meant that human beings were associated together in larger numbers and for more complex technical operations than ever before. At the same time, the quality of human associations had been changing drastically, so that in more and more areas of their lives people were now dealing with—or linked together with—others who were not their kith and kin. A significant index to these developments is provided by the rise of the modern nation state with its mass armies and its cult of patriotism.[4] The emergence of Sociology as an intellectual discipline was a reflex of these developments, and has its parallel in the emergence of Classical Economics. Let us recall that Classical Economics was predicated upon the most crude portrait of human nature and of social interaction; as compared to the heritage of Western political and moral philosophy, Classical Economics represented a genuine retrogression. Yet, its very crudity was essential to its task, namely that of describing a particular institutional system based upon partial or degraded human relationships. Much of Sociology can be characterized in the same fashion; the images of man and of social interaction are degraded in order that the scientist can attempt to describe large populations organized in complex nets of partial or loose association. To say this is not to derogate either Classical Economics or its sociological counterpart, but rather to warn ourselves that these models are necessarily and inevitably untrue. Such warning is necessary because both with Classical Economics and with certain systems of Sociology there has been a marked tendency to convert them from heuristic models, useful for social analysis, into ideologies and creeds. You will recall that Classical Economics was used to justify the most terrible and inhuman treatment of the lower classes of England. The warning about the fallaciousness of these models is also necessary because there is a tendency to regard Sociology and the other social sciences as representing a revolution in man's understanding of man. I would qualify this by saying that the revolution is in actual human society—in the emergence of mass, industrial, urban societies—and correspondingly in our understanding of how these societies are possible. The development of Sociology as a universal science of human societies has lagged far behind its development as the discipline devoted to the analysis of the national societies of the modern West.

If we turn from its genesis to its more recent present, we will find that Sociology (and for that matter, Anthropology) derives much of its character from a particular kind of intellectual tension, which may be clarified by a religious metaphor. By its very essence, the Christian religion is torn between the life according to the Great Traditional message of its scriptures and the religious function as asserted by Durkheim. On one hand, Christianity bears a message that is possible if men were saints liberated from mundane involvements, and, on the other hand, Christianity is the religion which embodies the moral solidarity of numerous actual communities. To be grasped as a real social phenomenon, Christianity cannot be taken as being either the one or the other, but as pulled between the two. Now, I would like to argue similarly about Sociology and the other social-sciences, that they are gripped by a tension between, on the one hand, building a pure, if inhuman, science and, on the other hand, being committed, empirically and morally to the human drama. Crudely speaking, Sociology is torn between the urge to abstract, even if the resultant abstraction says nothing of any significance about human beings, and, on the other hand, the urge to describe and understand human conduct, even if the resultant account fails to stand the rigorous tests of a pure science. Those researchers at the one extreme produce abstract, precise, and arid monographs, devoid of application to the human world, while those who are at the other extreme produce reports which are humanistic, or novelistic, or historical, or polemical in their texture.

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[4] In the sixteenth century, the elites who had controlled the European states had been so detached from the local populations that they would not have dared to arm them, lest the weapons be used for revolt. At that time, the national armies had been composed of imported mercenaries (Rieman, 1965), so that the integrity of the national political unit had been based almost exclusively upon the military force of the elite and very little upon a social unity. The only groups that had been solidary were local communities of kith and kin or the religious orders.

Now while I could spend my time trying to analyze the fallacies inherent in attempting to transform Sociology (or Anthropology) into a pure science, I think that such an effort would be misguided, because the tension between attempting both to become a pure science and to understand human existence may have been a good thing for (and perhaps the essential quality of) Sociology. The same tension seems to have been even a better thing for Anthropology. And, whether or not you agree or disagree with my analysis of Sociology as a science, I think that, as anthropologists, you will have to grant the value of diversity, so that Sociology and Anthropology are in better state because they harbor individuals and factions of opposite opinion, than they would be if they were characterized by greater unanimity. I fear, therefore, that we have to acknowledge the usefulness of having within our scientific societies bands of men who seem—in one's blackest moments—to be the most egregious fools.

Moreover, I have to acknowledge that all manner of advantages accrue to Sociology and Anthropology because of the popular belief that we are striding firmly and determinedly along the high road to a true Behavioral Science. Science is one of the sacred symbols of the U.S. and the modern world, and insofar as Sociology or Anthropology can claim to be creating a science, rather than writing history, cultivating the arts, addressing social problems, or doing any such other human and worthy activity, then to that degree, our disciplines seem to exercise a claim upon the resources of the community; and benevolent foundations, federal and local governments, all rush to assist our cause, and we gain not only funds for research, for teaching, and for teaching teachers, but also we acquire social status. Hence, to use once again, a theological metaphor, we may note that even if the belief in a pure Behavioral Science is a fantasy akin to belief in an after-life in paradise, nonetheless, it does have its mundane utilities.

Accuracy and Precision: A Dialectic

Corresponding to the tension between the ideal of a pure science and that of an impure or humanistic or moral science, there is in social science a conflict between the search for *precision* and the search for *accuracy*. Within the discipline of Psychology there has been a prolonged and extreme drive to achieve precision, almost regardless of accuracy or relevance; what it was that the experimental psychologist was able to measure has frequently been not at all clear, but the precision of his efforts conveyed the nimbus of natural science. Within the discipline of Sociology, it has been the sample survey that has for a long period of time represented the instrument of precision. About the sample survey there have developed the elegant statistical theories of sampling and tests of significance, so that by means of these the researcher could know precisely the probability of his errors. The data acquired by the survey could be processed mechanically—now, by computer—and this, too, conveyed the nimbus of natural science. Moreover, sample surveys have found practical applications, having been used to plot the strategy for campaigns for political office, of campaigns for selling soap, cigarettes, and government bonds, as well as for reducing the frictions of life in the armed service. Yet, the ironical feature of the sample survey is that it is postulated on an image of man that is quite *un*sociological—an image of man that is markedly similar to that which is found in Classical Economics. For, in the sample survey, man is seen as a social atom, a self-contained individual (Deutscher, 1966). The field interview situation is designed accordingly: with the respondent interviewed in isolation from family and friends by a person who is a stranger and who is instructed to minimize social interaction between himself and the respondent and, especially, not to discuss with the respondent the issues of the survey. Each respondent, thus suitably isolated, is asked to choose among a cluster of alternative responses, and when the questionnaire schedules have been returned to the survey offices, these aggregates of individual choices are summed by machine and interpreted by a professional staff housed in these offices. By means of the sample survey, statements can be made describing the population as a whole, and these statements can be as precise as there are funds available to be expended. Yet the limitation of the survey is that necessarily it can provide neither a portrait of social interaction, nor of human group life, nor of social solidarity, nor any portrait of particular sub-groups or societies. It is significant that the survey director has to assume that all his respondents speak, not only the same language; or, if he does not assume that, he assumes that languages are basically isomorphic, so that any question can be translated precisely into any language. To some degree at least, these kinds of assumptions are self-confirming, as the sample survey has tended to accompany the spread of mass urban society with its systems of mass media, mass production, and mass marketing. Yet, even where a mass urban society tends to exist, as within the U.S., there remains considerable *inaccuracy* associated with the most *precise* survey results. Consider, for example, the opinion surveys as to public support for U.S. involvement in Viet Nam, and the debate that has ensued as to the meanings of the clusters of responses revealed in these surveys. Consider further that the cost of support of the U.S. involvement may for one family be the risk of death of a son serving overseas, while for another family the cost may be a decrease in the purchasing power of an annuity pension, while for yet other families the U.S. involvement may mean the opportunity for a better job or the opportunity for a rootless youth to find meaning in his life by joining in the adventure of a national crusade. Converting these disparate human experiences into a series of numerical tabulations is the task of the sample survey, and, as you will understand, it is these sorts of operations which give to so much of Sociology the quality of being a bureaucratic science.

It should be almost unnecessary for me to remark to this audience on the extreme contrast between sample survey procedures and those associated with participant observation and ethnographic field research. Where the survey interviewer confronts an isolated individual, the ethnographer confronts a little community, and where the interviewer obtains as data only a set of verbal responses, the ethnographer learns about the community by participating in its life. Over a period of time, the ethnographer learns the language of the community, its world view and ethos, and so is able to see meanings in their verbal comments and behavior which would quite escape the outsider, and in general the ethnographer can interpret particular actions within their social context. So accurate and detailed are the reports of a good ethnographer that we have little in the way of precise languages or frameworks for their handling.

If you have been following this argument, then you will have realized that *precision* is not so much an abstract virtue in social science as it is a necessity for certain types of investigations within mass society. You will also realize that, so far, precision in social science has been acquired at the expense of *accuracy* and that that is a poor bargain. I think it important here to emphasize the limitations of precision because recurrently there emerge within the social sciences fads which are based on the appeal to precision, as if by being more precise the investigator was thereby being more scientific. In their insistence upon rigor as the supreme virtue and in their indifference to accomplishment, these fads recall to mind the behavior of sectarians within Judaism and Christianity. Some of these sectarians argued that the Kingdom of God had not appeared because the true believers were not sufficiently pious, and when in the succeeding months and years the Kingdom of God still had not appeared, they again insisted that the cause was lack of piety and exhorted higher standards of rigor in conduct. At times, it appears to me that those who preach the creed of a pure science are being motivated by a similar chain of reasoning: that we are failing to achieve the Kingdom of Behavioral Science because we have not been sufficiently rigorous in our methodology, but if we will now only purify ourselves and put away those humanistic fleshpots, then the prophecy will be fulfilled and scientific salvation assured.

Against the prophets and their methodological fads, I invoke the statement of Kroeber with which I opened my discussion, that human progress depends less on novelty than on continuity. If we have social science today, it is not simply the consequence of an intellectual revolution of the past century, but, more important, it is the outgrowth of the millenia during which man has been struggling to understand himself. During this growth, human beings have set themselves progressively more difficult tasks by utilizing their previously acquired knowledge in order to construct ever more complex and intricate systems of societies. Our current difficulties in describing and analyzing those systems of societies is not a mark of our failures as social scientists, but is intrinsic to the paradoxes of human evolution.

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AMERICAN ANTHROPOLOGICAL ASSOCIATION

The American Anthropological Association is one of those organizations among the social science groups that would prefer to be known as a learned society, rather than a professional association "like AAUP." Mr. Edward Lehman, the executive secretary of AAA, hastens to point out that the association has concerned itself with meetings, publications (four journals, six newsletters, six annuals, and numerous monographs), and other such traditional scholarly trappings, although he admits that the needs of the membership dictate an increasingly professional approach. And in fact, the declared purpose of the association is "to advance the science of anthropology in all its branches and to further the professional interests of American anthropologists"–a curious kind of schizophrenia.

It is not surprising that anthropology has not been much taught in the schools or used to form school policy. As a separate field, it is probably less than a hundred years old. The successes and problems of *Man: A Course of Study* and of other mediated studies of small group societies (cf. Jones, *Fantasy and Feeling in Education*) suggest that anthropology as a school subject–particularly the anthropology of the non-Western small group–will continue to find an uneasy place in our schools. A further factor in the rare appearance of anthropology in the schools is the fact that anthropology–both the discipline and its representative society–is heavily controlled by the professor at the university whose major concern is likely to be research rather than education. (Secondary school teachers may be eligible for membership in the American Anthropological Association, but very few are members.) A strong inclination toward self-perpetuation and self-replication is apparent among anthropologists, despite the fact that there are not enough jobs to go around. Anthropology sees itself as less "structured" and so more "flexible" than some of the other social sciences, and it has apparently been able to project a favorable image if one is to judge by the growing number of new departments and the increasing enrollments, a rise of nearly 20 per cent per year. Interest in ethnic studies and the community as a base for social action has contributed toward the growth of the field. Oddly, however, the emphasis in the discipline remains largely dominated by sociological/cultural anthropology in the Margaret Mead tradition. Anthropologists like George Foster (U.C.-Berkeley), who uses anthropology to study community health problems, represent a maverick element in the profession. And the ideas expressed by the late Robert Redfield seem not to have been heard at all:

> . . . teaching is effective in so far as it tends toward the development in the young person of a coherent body of attitudes and values adequate to the life-needs in his particular community. The classroom is important only as it is understood in its relation to the society and culture of the children who occupy it, and teaching will be effective only as it is related to society and culture.
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> Being established in the viewpoint of culture as an organic unity, anthropologists seem to be calling upon the teacher to understand, not so much teaching methods, as the community in which the teaching takes place. The real nature of effective teaching, these anthropologists are in effect declaring, lies, not in ways of preparing instruction units nor in devices for testing reading comprehension, but rather in the part played by the school and by what goes on in the school in the cultural life of the children's community.[1]

Anthropology still evidences the traditional ineptitude of the social sciences in dealing with current social problems in an environment overwhelmingly in need of social problem solving. Some of the most interesting work directed toward social problem solving has been done by persons concerned with the anthropology of American education as a culture-destroying institution. However, such work has not been widely used by state and national problem solvers, although a few isolated cases where anthropologists played a major role in constructing and defending new kinds of institutions do come to mind—for example, the Rough Rock Demonstration School on the Navaho Reservation.

One would not characterize anthropologists as a naturally democratic social group, particularly where membership is concerned. Membership in the American Anthropological Association was highly categorized, as of May,

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[1] Margaret Park Redfield, ed., *The Social Uses of Social Science* (Chicago: University of Chicago Press, 1963), pp. 97-98.

1971. A fellow, the only kind of member with both the right to vote and the opportunity to hold office, must be either a Ph.D. (or equivalent) in anthropology, a Ph.D. (or equivalent) in an allied field with demonstrated professional or scholarly interest in anthropology, or an M.S. in anthropology who has made a significant contribution to anthropology in teaching or research and has been actively engaged professionally in anthropology for at least five years. A voting member is someone (usually a graduate student in anthropology) with a professional interest in anthropology who is nominated by a fellow in good standing; such a member can vote but not hold office. A corresponding member is one who meets the qualifications for fellow but resides permanently outside the United States; such a member cannot hold office and cannot vote unless actually in attendance at a meeting. A non-institutional member is anyone with a demonstrable professional interest in anthropology but none of the other qualifications for membership; this category of member cannot vote in elections or hold office in the association. In 1971 fellows constituted 19 per cent of the membership and voting members about 31 per cent.

AAA has a representative democratic structure, albeit one which appears to be losing some of its meaning for members. The society is governed by a representative assembly known as the council; this body consists of fellows and voting members and constitutes the final source of authority in the association. Officers are elected by the council from among the fellows. Despite the fact that membership is growing, participation in voting is decreasing (from 64 per cent in 1969 to 49 per cent in 1970 to 46 per cent in 1971). The nominating committee for officers of the AAA is the executive board, and it nominates three fellows for each vacant office. Any five fellows may nominate an additional candidate, provided the nomination is submitted in accordance with prescribed rules. But there is a trend in the association toward a somewhat more flexible organization. For example, in 1972 the executive board proposed that representation be provided on the board for each of the five fields of anthropology. Moreover, journal editors, appointed for three-year terms by the executive board on the "buddy" system in the past, will be chosen somewhat more democratically in the future, according to Mr. Lehman. Since the present editors function somewhat autonomously, this would be a wholesome development.

The AAA mostly relies on the resources of its own members for its existence. The financial resources of AAA come from membership dues and grants from the National Institute of Mental Health and the National Science Foundation. A little money is also available from the USOE and the American Council of Learned Societies. NSF grants for travel (for international scientific information exchange), a visiting scientist program (currently being continued on AAA funds alone), and a national register in anthropology brought somewhat less than $21,000 into the association in 1969-70, not a significant figure in a budget of nearly $350,000. Moreover, AAA does not see itself as being or becoming heavily involved with government. The Council on Anthropology and Education, a three-year-old offshoot of the association, has reasonably close ties with the Office of Education, chiefly through the offices of Mr. Lehman; but AAA is almost out of the grant business. Having been "burned" by McCarthyism and Project Camelot, anthropologists feel that to be used by government is to be abused by government; and they are not anxious to reinforce ties with Washington. They have, on the other hand, tried to develop closer bonds with the other social sciences.

Some of the most interesting research on education has been presented at, and fostered by, a subsidiary of the AAA, a group called the Council on Anthropology and Education which represents the principle thrust of the association in the area of undergraduate education. It is backed by AAA, although it has made little visible impact on the association itself; and 75.5 per cent of its more than 1,000 members are members of AAA. The purpose of the council is to associate its members in study and efforts to advance the coordination of anthropological data, theories, methods, and insights with educational problems, practices, and institutions. It was originally formed to expand, broaden, and continue the research effort of the Anthropology Curriculum Study Project and hopefully to engage increasing numbers of anthropologists in that effort. For example, in 1972 it sponsored a symposium, together with the American Ethnological Society, called "Culture and Society," which tackled some of the toughest political educational problems which our society faces. The group has some communication networks and is contemplating more formal ones.

In the past, anthropology has been primarily a college and university subject and has had little or no connection with pre-collegiate education. This may be becoming less true. The original force of official anthropological intervention in the schools came largely in the form of efforts to reform the curriculum. Then in 1962 AAA established the Anthropology Curriculum

Study Project, funded by NSF until 1971, whose objective was to concentrate on factors crucial to a student's general education (rather than to focus on all that is relevant to the development of professional anthropologists). The project developed units for the schools on such topics as early man, the emergence of civilization, and various forms of social organization. It also produced a report entitled *Two-Way Mirror: Anthropologists and Educators Observe Themselves and Each Other*, some teacher service materials, and a secondary school course called *Patterns in Human History* which is currently in use with undergraduates.

Two-Way Mirror contains information on all the curriculum materials (books, films, etc.) developed by the Anthropology Curriculum Study Project: how and by whom they were produced, what sorts of evaluation and distribution they have undergone, what they cost. About two-thirds of the book is devoted to a description of the ACSP research program which tested the curriculum materials turned out by the project (especially *Patterns in Human History*) in selected California high schools and attempted to make them adaptable to local conditions. This section of the report resolves itself into an ethnographic study of one of the schools (a culturally mixed high school) in which *Patterns* was evaluated to determine how the curriculum materials might be successfully integrated into the existing program and a report on students' cognitive learning during their participation in the course, including tests which were used to determine the quality and quantity of this learning. The findings of the cognitive studies showed, among other things, that student learning for these materials was not dependent on reading achievement. The materials themselves specifically do not include tests because the course emphasizes class participation rather than quantifiable information absorption and storage. The most significant finding of the ethnographic studies was that teachers' heavy history orientation and assumption of teacher role dominance and student passivity could seriously interfere with a course like *Patterns* with its emphasis on the centrality of the student's role as learner and its anthropologic approach and emphasis. Another publication of the ACSP, "Students and Teachers: Strategies for Discussion" and "What is Anthropology? Four Samples" (lesson plans), represents part of the project's effort to educate teachers in the use of the innovative materials it has produced. Nevertheless, *Two-Way Mirror* hedges the most in the area of teacher preparation for using the curriculum materials developed by ACSP; and while the solution is considered to lie in strong teaching guides for all materials, the fear of teacher sabbotage is still an obvious factor in the report.

The following excerpts from *Patterns in Human History* appeared in *Two-Way Mirror* and may provide some insight into the nature and organization of the course:[2]

1. **[Structure]**

> *Patterns in Human History* consists of four broad topics. The course begins with a "how to" book: *Studying Societies.* This basic orientation provides some ideas and tools for observing and recognizing patterns in human behavior. The life ways of two primitive societies, the Bushmen and the Mbuti, provide some of the data for investigating one type of human society—hunter-gatherers. *Studying Societies* sets the stage for using the three other parts of *Patterns* either as a sequence or in various combinations.
>
> *Origins of Humanness* presents the evidence for two million years of "human" existence and gives some insight into what the development of humanness has involved.
>
> The implications of food producing for the development of new types of societal organization is the central theme of *The Emergence of Complex Societies.* Tribal organization as one new type of society is discussed. Particularly significant topics considered here are: the rise of the earliest civilization, the evolution of law, and the significance of religion in human life.
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> In *Modernization and Traditional Societies,* peasant society completes the typology of human societies, and the dilemma of traditional society in a world of complex societies is considered. (p. 77)

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[2] *Two-Way Mirror: Anthropologists and Educators Observe Themselves and Each Other,* The Anthropology Curriculum Study Project supported by the National Science Foundation (Washington, D.C.: American Anthropological Association, 1972). Course materials themselves were not examined because they consist of films and a diverse range of other materials. They are expensive to obtain for examination in sample form.

2. **[Goals]**

The goal of the plan is the effective teaching of a course that blends anthropology and history. However unfamiliar a teacher may be with anthropology, this plan makes effective teaching possible from the very beginning. But it does something else. The teaching plan is itself a course in anthropology. Teachers who study its ideas seriously and work through them in classroom situations will become professionally competent in anthropology.

Paradoxically, this will free the teacher in subsequent years from the teaching plan. The short-range goal of the teaching plan is to make possible the effective teaching of *Patterns.* The long-range goal is to increase the professional autonomy of the teacher and make possible increasingly effective teaching of the anthropological ideas that, in the teacher's judgment, contribute to the social studies. (p. 78)

3. **[Teaching Method]**

The course, *Patterns in Human History,* is in a real sense to be found only in the teaching plan. The student materials, for good reasons, have no inherent organization. The readings do not have introductions that tell the student what the readings mean. The significance of the full mix of materials–readings and other media–emerges from intellectual operations that are under the control of the teacher. This strategy avoids undermining the inquiry process and thus offers the best opportunity for original analysis of the data and for open-ended insight. (p. 78)

4. **[Content of the Four Parts]**

Patterns in Human History: Studying Societies (Part I) covers three topics:

Life in a Small Society–description
How Human Societies Operate–the significance of status and role

Life in a Small Society–analysis (p. 80)

> . . . . In *Origins of Humanness* (Part II) we are establishing important answers to the questions: Who are we? and, What are we like? Who we are and what we are like is not only a matter of biological identity, it is also a matter of behavior. And the patterns of behavior that are human are the result of a very long process of selection for traits that worked within a system of adaptation. (p. 86)
>
> What has happened to the human species, to human societies, to the qualities of human experience, over the last 10,000 years? The answer provided in *Patterns of Human History: The Emergence of Complex Societies* (Part III) is macroscopic but not simplistic. It is that new kinds of types of societies have emerged, differing in scale and complexity from the hunter-gatherer societies in which all human creatures had hitherto lived and in which the traits of the human system of adaptation had been forged.
>
> These new types of societies were tribes and states. (p. 93)
>
> In *Modernization and Traditional Societies* (Part IV), we will consider a social pattern that has persisted for the last four thousand years, since the first complex societies developed: that is, states which have an agricultural base and a submerged agricultural labor force. Such societies have continued into modern times. Today we call them traditional societies. Many of the crucial issues (and much of the agony) of our own times arise from the conflicts of tradition, industrialization, and modernization. (p. 99)
>
> We look at peasants, then, as a way of learning some things about traditional societies of our own times, as a way of gaining perspective on crucial international issues, and as a way of learning yet more about culture as adaptation. (p. 100)

In 1945 Robert Redfield suggested that the study of cultures through the discipline of anthropology should have an important place in the general education curriculum:

> On the one hand, the end is to cause the individual to see that there are ways other than his own which are compatible with human needs and with the dignity of the individual; on the other hand, the end is, through comprehension of another way of life, to develop the power to think well about one's own way of life so that that way may be improved. To some degree the study of anthropology provides this liberalizing experience through the acquaintance it gives with cultures other than our own.[3]

He proposed replacing the usual series of disconnected social science units with a more long-term, integrated approach to the study of man and culture:

> . . . . I suggest the possibility of substituting a persisting and penetrating consideration of some society and culture notably different from our own and well provided with documentation. This might be a principal part of the social studies curriculum at some place between the ninth and twelfth school years.[4]

Perhaps in response to ideas like Redfield's, the Educational Development Corporation, using the talents of an anthropologist powerful in the AAA (but not working through the professional society) embarked in the 60's on a very ambitious anthropological curriculum for childhood through graduate school–one which was never completed but which did give rise to some of the most imaginative and unusually beautiful films and printed curriculum materials ever created for schools anywhere, those contained in *Man: A Course of Study*. However, printed and film materials, structured from outside the classroom where the teacher and children know each other and other people, are likely to lead to fantasies and feelings about non-Western people which the curriculum makers never intended and to learning which subverts the purposes of the best of theoreticians (cf. Richard Jones, *Fantasy and Feeling in Education*). The efforts to make representations of non-Western societies in the classroom and so to combat racism and ethnocentrism and to communicate the concept of "culture" continue, but the task has proved harder than most curriculum makers originally imagined. And much of the search for uses for anthropology has turned from the curriculum to analysis of the classroom or school as a cultural entity, to researches such as those conducted in the classroom by Spindler or by the University of Chicago people who worked with the Woodlawn experimental school district, or to analyses of community-school authority relations such as those conducted by the Waxes or H. Lewis, or to developmental work on whole institutions such as that carried on at Rough Rock by Robert Roessel and Sol Tax—work which continues to look hopeful. Such work, because it sometimes threatens to intervene in traditional school social system relations is fairly dramatic, and dramatic undertakings may not always be palatable to official "professional associations."

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[3] Redfield, *op. cit.*, p. 96.

[4] *Ibid.*

In a 1972 interview, Ed Lehmen was asked, "Wh[illegible] anthropology be taught at the pre-college level?" His reply was that the discipline provides useful insights for students in understanding human behavior. He also expressed the feeling that anthropology could be an effective tool in studying public school systems as systems. He is probably right. Anthropology may not deserve all that Vine De Loria has said of it in accusing anthropologists of sentimentalizing and exploiting the people they study. The anthropology organization is not as democratic as it might be, nor are many anthropologists engaging education policy issues at the level that they might. Those that are engaging policy issues are not being heard by the new managers in education. But the Council on Education and Anthropology, the new research on culture and the schools, the new ethnographic ways of looking at schools, classrooms, children and teachers hold considerable promise and already have influenced the creation of new curricula, schools, governance structures, and teaching methods.

AMERICAN SOCIOLOGICAL ASSOCIATION

Whereas psychology has long had a powerful impact on educational policy, sociology is relatively new to the game. If the period 1900-1940 marked the halycon days for psychologists as school policy makers–masters of learning theory, testing, IQ analysis, and everything else that had to do with the schools' stop-go system–the 1950's and '60's were the decades of the sociologists, as increasing attention was focused on the schools and colleges as social systems rather than as purveyors of information to, and judgments on, individual children. Many of the period's court decisions with respect to schools, particularly those having to do with the effects of racial separation, were based on expert testimony given by sociologists. Section 402 of the Civil Rights Act of 1964 directed USOE to conduct a survey of the effects of separate education:

> The Commissioner of Education shall conduct a survey and make a report to the President and the Congress, within two years of the enactment of this title, concerning the lack of availability of equal educational opportunities for individuals by reason of race, color, religion, or national origin in public educational institutions at all levels in the United States, its territories and possessions, and the District of Columbia.

When the Commissioner made his decision as to how to carry out the congressional resolution, he turned to a sociologist, James Coleman, to do the survey design and study. Some sociologists would argue that the Coleman report, based as it is on the sample survey, sacrifices "accuracy" for "precision" and leaves out the compelling human realities of racial isolation in the mid sixties. Once the study was made, its data were used to further desegregation efforts and to encourage reform of teacher education (consider, for example, *The Education Professions: 1968*, the Commissioner's report on teacher education), although the government's follow-up of the report was more lethargic than many people would have liked. When the "Behavioral and Social Science Survey Committee" made its report to the National Academy and the Social Science Research Council (mentioned above under "Psychology"), on behalf of increased social science support, it mentioned the Coleman report as its prime example of what sociology could do for

America. Not surprisingly, the ASA contributed to the work of the Social Science Survey Committee.

However, it would be wrong to see the American Sociological Association as a vigorous proponent of educational reform or to believe that many sociologists are deeply involved in education reform, apart from the policy implications of the data which they develop. Dr. Otto N. Larsen, the executive officer of the American Sociological Association, remarked in a September, 1972, interview, that if one wanted to know where his association was heading, all one had to do was to consider the course of the American Psychological Association and understand that that is where ASA would not go. The members of ASA have voted against services like insurance, thereby desiring to indicate that their association will remain a learned society, rather than a professional group. Dr. Larsen noted that about 80 per cent of sociologists are associated with colleges or universities. However, most sociologists see their function in terms of research and publication, rather than teaching, perhaps because sociology has only recently come into its own as an academic discipline, its acceptance acknowledged by better treatment for sociology teachers in the schools.

Concern for "legitimacy" appears to be a central issue in the membership rules of the ASA. Members of ASA must have a Ph.D. in sociology or a closely related field or must have completed at least three years of graduate study in such fields in good standing at accredited universities or, lacking the above qualifications, must present evidence of comparable professional competence and commitment, as determined by the council. There is a membership category called "associate" which is open to anyone interested in sociology, but only those with full membership status may vote and hold office. A committee judges each membership application. About 87 per cent of the members are Ph.D.'s or doctoral candidates in sociology; the other 13 per cent are mostly in government, with some representation from business and industry. The membership is increasing, albeit slowly. But it is a loyal membership; participation in association elections grew from 44 per cent in 1969 to 55 per cent in 1970 and 57 per cent in 1971. Members pay $10 to $30 in dues, depending on membership status. Most of the money that flows into the society, apart from dues, comes from NSF, NIMH, and USOE. For example, ASA received several grants from NSF between 1969 and 1971 for a visiting scientist program, a national register, and travel for purposes of scientific exchange.

If democratic rule is any indication of a society's capacity to further the reform of education, ASA does not have it or has such a cumbersome form of it that real participation in formulating society policy by rank-and-file members seems almost impossible. ASA does not have a representative assembly but is governed by a council composed of the officers of the society and twelve members-at-large. The twelve members-at-large and the vice president (as chairman) constitute the nominating committee; they present two nominations for each office. Additional nominees may be chosen if written in by 10 per cent of those returning ballots, in which case a second ballot is prepared. All officers are elected by the voting members. Editors of journals are nominated by the elected publication committee and appointed by the council. The council also appoints the executive officer and may remove him by majority vote. The association is subdivided into sections; sections are formed by a minimum of 200 members who express interest in a particular field of study. Officers of sections are elected in such a way as to represent equally community colleges, four-year colleges, and universities; additional dues is charged members who belong to sections.

ASA has as one of its goals, along with improving research and inquiry in the study of society, "to stimulate and improve . . . instruction." One journal dedicated to this goal is called *The American Sociologist*; its editorial policy is to emphasize undergraduate education. Another is a new periodical, partially sponsored by ASA, called *Teaching Sociology/Anthropology*.[1]

Although we have suggested that education reform is not a primary agenda item for ASA, it has been moving along several educational fronts in recent years. Its most substantial venture has been a seven-year, $3 million study, funded by NSF from 1964 to 1971, called *Sociological Resources for the Social Studies.* The object of the project was to plan and produce a variety of sociological materials of quality which would be of interest to high school students. In addition to a newsletter and a promotional filmstrip, SRSS produced a one-semester high school sociology course, *Inquiries in Sociology*, including text, instructor's guide, transparencies, and supplemen-

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[1] There is an extensive publication program. *The American Sociological Review* appears six times a year. Members also receive *Contemporary Sociology*, a newsletter, and a professional register. Other journals are available at reduced rates to members.

tary student materials; a set of paperback books of readings, intended as supplemental material for high school social studies courses; a series of "episodes in social inquiry" (including instructor's guides), short high school study units designed for coverage in two-week segments. The readers each contain twenty articles, one introductory chapter and nineteen articles adapted from papers by eminent sociologists, on sociological topics of current interest; they cover such subjects as *Racial and Ethnic Relations, Life in Families,* and *Cities and City Life.* The "episodes" are supposed to give "punch" to existing social studies courses and help to their teachers; individual numbers deal with poverty, black leadership, stereotyping, religion in the United States, and science and society. *Inquiries in Sociology* was compiled by professional sociologists and high school social studies teachers; and it is promoted as a course which stresses the "inquiry approach" and sociological methodology. It is broken down into four sections: adolescence and socialization, institutions, stratification, and social change. Part I of the book deals with adolescents and their subculture, especially with respect to how people arrive at this stage in their development and with "rebellion" and other narrowly defined problems. Part II presents the established answers to the questions raised in Part I by means of a description of the structure of social institutions, but it takes a more documentary approach. Part III presents a more detailed analysis of the highly organized class structure of society based on its value system. The difference between Parts II and III is the difference between the means of ordering a society and the ends for which it is ordered. The concluding section on social change adds the dynamic element to the static picture of society presented in the first three sections of the book and presents a final view of society and its structure as a shifting pattern of relationships. The SRSS Newsletter has this to say about *Inquiries in Sociology:*

> There are several distinctive features of *Inquiries in Sociology.* First, it emphasizes learning through inquiry. We tried to make students active partners in the learning process by—as much as possible—posing questions and encouraging them to work out their own conclusions before turning to the text or to the teacher. There is a recurrent instructional pattern: question—data—analysis—tentative answer. In short, the material is strongly inductive and requires a high level of student participation. This is not to say that the deductive aspects of reasoning are ignored. For we, of course, constantly move back and forth in our thinking from induction to deduction. In fact, several lessons in Part I are

devoted to an activity that involves the development of hypotheses from given propositions, then tests these hypotheses by using data on the students themselves.

Second, students are actively involved in a wide range of activities and materials. These activities and materials include such things as field work, questionnaires, quasi-laboratory exercises, historical and anthropological materials, categorizing the behavior depicted in photographs, auctioning nickels in class (to illustrate the development of a norm), ranking occupations, and working out solutions to reduce prejudice. This variety, together with a high degree of student involvement, has produced, in most settings, a high degree of student motivation.

The third factor which distinguished *Inquiries in Sociology* is the elaborate instructor's guide which is an integral part of the course. One characteristic of teaching materials designed to promote inquiry is that the student materials alone may tend to make little sense and they may even seem incomplete or disjointed. This is due to intentional withholding of information from students, to posing a question which students are to ponder, or perhaps from asking students to engage in an original research project for which the answer is unknown. The instructor's guide for *Inquiries in Sociology* fills in the gaps intentionally built into the student text.

And finally, a fourth distinctive feature of the course, and one touched on earlier, is the collaboration of high school teachers and of sociologists in the course's development. *Not many years ago cooperative effort between professionals, in any discipline, and high school teachers was unknown.* Fortunately, this is no longer true. Many current curriculum projects have made high school teachers active and equal partners in the development of their materials. High school teachers, through all the developmental stages of this course, have made invaluable contributions.

An important aspect of SRSS is classroom evaluation of our materials. . . . A variety of techniques were used to assess the strengths and the weaknesses of the course. These included:

> multiple choice examinations, student and teacher questionnaires and rating scales, daily teaching logs, and classroom observations by SRSS staff. (SRSS Newsletter, Summer, 1971.)

It is not known what impact this effort has had on the teaching of sociology in secondary schools; sociology got into the curriculum-making business late, and it was also late for the revision of licensing game. ASA does have an Ad Hoc Committee on Teaching Sociology and Social Studies in Secondary Schools which has submitted a proposal to the USOE to fund a permanent Commission on the Training of Teachers of Sociology and Social Studies for secondary schools. Another ad hoc committee addresses itself to the Social Studies Curriculum in the American Secondary School.

Even greater attention has been directed toward the area of general undergraduate education. There is a section on undergraduate education, newly formed and with its own newsletter, which has been allocated some $2,200 for a special planning workshop on teaching sociology. The purpose of this section is to provide an organizational base for undergraduate teaching of sociology through a common platform for those engaged in undergraduate teaching, through exploring the intellectual, educational, and programatic needs of undergraduate education, and through the development of resources. These purposes will be implemented through meetings, workshops, projects, publications, and the support of experimentation and evaluation. This section will address itself to the needs of community colleges, four-year colleges, and universities. There is also a Committee on Teaching Undergraduate Sociology which has proposed a conference and a commission to study current programs in sociology. The recent changes in sociology curriculum reflect current areas of national concern–ecology, population control, minority studies, and sociology of the law; and sociology, like anthropology, may be said to be contributing its bit toward eliminating "education for stupidity."[2]

Although the ASA claims to be a learned society, cut off from all the "dolphin's muck and mire" of politics, one of the benefits of membership in

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[2] An Ad Hoc Committee on the Role of the Teacher-Sociologist and a section on sociology and medical education are also actively engaged in sociology as it is taught in college and beyond.

ASA, according to Dr. Larsen, is that members have an opportunity to influence the course of sociology in ways in which non-members cannot. That influence is being felt more and more strongly in Washington. ASA is tax-exempt and wishes to remain so; therefore, it does not officially lobby. However, the association is often called upon to recommend sociologists to perform certain tasks for the government, and it keeps a file of members who are willing to serve. One such service involved membership on the Commission on Obscenity and Pornography; others have related to population studies. Members of the association sometimes testify before congressional committees, but as individual sociologists, rather than as representatives of ASA. ASA takes no active part in accreditation or credentialling, but it obviously has no small concern for the problem of curriculum standards. It does provide consultation for colleges and universities relative to what constitutes a good sociology program. The association does not yet participate in NCATE; but it has been invited by the American Historical Association to involve itself with that organization.

The federal government is undertaking a second round of programs which look at the relation between "school and society," now more particularly from the perspective of cross-generational rather than minority-white relations. Career education is part of that project, and James Coleman wrote one of the important pieces in the growing literature of that coming educational field. Sociologists will undoubtedly do much of the basic research and later policy formulation required by career education, NIE, the new Teacher Corps, and other programs. It may be useful to encourage ASA, as it advises the federal government, and the federal government itself to consider a wide range of students of society to assist it in educational studies–including ethnomethodologists, symbolic interactionists, Marxists, game theorists, and others who are not structural fundamentalists or who do not rely on the sample survey for their data. Concomitantly, it may be useful to have sociologists explore what their data say with respect to the institution-building process (as anthropologists have done at Rough Rock). Finally, it would appear useful to grant sociologists their "legitimacy" so that they could take a less defensive academic posture and try out, with those who might wish to work with them, what their theories of social organization imply for the reorganization of the relationship between school and society through actual institution building. Coleman's *Youth in Transition* seems to point in that direction, but its spirit and the spirit of similar documents advocating an emphasis on praxis is not an emphasis which has gripped the profession, and the ASA itself seems surprisingly undemocratic in structure and conservative in its consideration of education reform, given that it is the professional organization of people who have been characterized, outside academia, as the "allies of innovation and social change."[3]

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[3] *The Behavioral and Social Sciences: Outlook and Needs* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969).

AMERICAN HISTORICAL ASSOCIATION

The American Historical Association, regarded by some informed observers as the most prestigious of the professional associations in the social sciences, is, by its own account, "a non-profit, membership corporation, created in 1896 by special act of Congress for the promotion of historical studies, the collection and preservation of historical manuscripts, and the dissemination of the fruits of historical research." It comes to the American public wrapped in the robes of a European respectability; its executive offices are located in Washington, D.C., a symbolic gesture reflective of the fact that it was modeled on the great associations of French and English historians which received strong governmental support, both moral and financial. But support has not been forthcoming for the American organization. As a consequence, AHA is much poorer than the science societies and almost as poor as the other social science groups. Some ties have developed between the historians and the government. For example, during World War II there was a temporary increase in the number of historians in the District of Columbia–many of them working on war concerns–and even now there are many historians involved in government history-and-policy activities. AHA has been peripherally connected with the American Revolution Bicentennial Commission, and the fluctuating direction of that effort has been of no little concern to both radical and conservative members in the AHA so that the association seems now to have eschewed an active role in the preparations.

Membership in the society is open to anyone interested in history, professionally or otherwise, and all members may vote and hold office. In fact, 55 per cent of the members are college or university professors; another 22 per cent are students, and the remaining 23 per cent are secondary school and private school teachers, archivists, and writers.

The organization is governed by a council consisting of the officers and twelve other members elected by the membership at large, a body which operates like a board of directors and cannot be said to be representative in any real sense, particularly since, in 1971 at least, only 19 per cent of the members voted in the election of officers. The council appoints the executive director of the society (for a three-year renewable term) and the editors and managing editors of its journals. A nominating committee is responsible for placing names of potential officers of the association on the ballot; only a petition signed by at least one hundred members can add a name to the list. The nominating committee is self-perpetuating; it nominates and elects its own members.

It is hard to say whether AHA "lobbies." Certainly it does not do so in any formal sense. However, its executive secretary, Dr. Paul Ward, did testify before congressional committees about four times in a seven-year period; the AHA leadership feels that it has some influence with some members of Congress; and the AHA executive secretary and other leading members of the society have served as consultants to Congress, to the Office of Education, and to a variety of other governmental agencies and private foundations which are in the grant business. In any case, it is clear that the AHA is more than a "learned society" engaged only in exchange of ideas. It looks after the interests of the profession through careful, quiet work on Capitol Hill and in the bureaucracies. And, internally, it also looks after professional concerns through such activities as a placement information bulletin.

Traditionally, AHA has been self-sufficient and not primarily dependent on government funds for existence. Its budget for 1970 was $566,415, of which 35.2 per cent came from dues (regular members pay $20, students pay $10), 29.2 per cent from publications, and 14.4 per cent from the annual meeting. During that year it received no grants. However, between 1968 and 1970, AHA did receive a little over a million dollars from the USOE for a study in history education. These funds went to a project based at the University of Indiana which was not designed to produce a new curriculum along the lines of the BSSG or SMSG curricula (a step which the AHA executive felt might inspire "trouble among historians"). Rather the project was designed to generate ideas which might be useful in improving the teaching of history at the local level. To this end teams (each composed of a university professor, a college of education representative, and a school supervisor) attempted to promote more effective cooperation among professional historians and school personnel. In an interview in September, 1972, AHA leadership indicated its feeling that most of the successful work was accomplished in the second year of the project. However, the project does not appear to have inspired widespread further cooperative work between higher education's history people and history people teaching in the common schools.

In general, AHA's leadership has been concerned with educational reform and has exercised some leadership in the cause; but the results have not been spectacularly successful. A Committee on Undergraduate Teaching, organized in 1965, has urged that AHA undertake a survey of teaching in undergraduate colleges and universities and also that a new journal of history education be established. In 1967 a Feature Film Project was initiated. There is a Committee on Teaching in the Schools (pre-collegiate) and a Service Center for Teachers of History. Finally, in 1966 and 1967 AHA, along with the Organization of American Historians and the National Council for Social Studies, attempted to gain financial support for an independent organization devoted entirely to improving the quality of history education. However, none of these projects has come to sufficient fruition to have a major impact on American education.

The American Historical Association has much to answer for if one looks at its "ancient" interventions in America's schools. A panel of seven historians chosen by the association published a report in 1899 which recommended four years of high school history–ancient, medieval and modern European, English, and American. The picture of history recommended was very like that which Alton Becker (p. 106) saw as causing much of our problem in Asia: "In this curriculum, the modern world outside the Atlantic community existed only as seen from the decks of Western gunboats." (Ed Fenton, *The New Social Studies*, 1967, p. 61). A variant of this structure (modified in 1916) still appears in high school curricula that place World History in Grade 10 (substituting for ancient and medieval), American History in Grade 11, and European History or Modern Problems in Grade 12. And the view of history in many of the materials taught in the schools has changed even less–as Jules Henry's remarks point out and as the experience of many citizens' committees looking at ethnocentrism in textbooks confirms (cf. League of Women Voters of Minnesota and Nebraska reports on Indian education in their respective states).

For the future, there is a strong possibility that the journal of history education suggested by the Committee on Undergraduate Teaching is actually forthcoming. The proponents of this project are interested in developing a "network" for the exchange of experiences in and suggestions for teaching key issues and facts in history, with the expectation that new techniques may eventually displace some of the more traditional scholarly forms. The journal would be aimed at teachers at all educational levels. The AHA leadership at times has articulated its wish for workshops in history education for prospective college and university history teachers; such a workshop (or institute) was undertaken in the recent past. It would also like to develop films which would help young people visualize the past accurately and critically.

Partly, the diffuseness and limited impact of history's efforts in undergraduate and school educational reform may reflect the nature of historical study itself: that it is in what Kuhn would call a pre-paradigm state, having no single pattern for investigating the past. There are likely to be as many investigative methodologies as there are historians; and while they are likely to reject ordinary lay mythologies about what happened in the past, they are likely to offer extremely diverse views of what did happen and how to discover the truth about it. Consider the present controversy surrounding the use of the computer to examine plantation records in the South and the view of slavery as efficient and relatively benign which has emerged from the employment of this method. When historians are asked to speak to education reform, they are likely to be concerned that the methods and findings of historians whom they oppose not be at the base of such reform. In some cases, local historians or local historical societies do achieve a kind of consensus. Hence, it is not surprising that local and state historical societies probably turn out more printed and audiovisual educational material than does AHA and may have a greater impact than does the national organization on how history is taught where their influence is strong.

If AHA has not been strong as an educational reform agent in the schools and colleges, it may have done no greater harm than reinforcing the departmental ethos. AHA plays no part in accreditation at the present time, although the society is under pressure from some elements among the membership to do so. It has been trying, somewhat unsuccessfully, to develop a strong cooperative relationship with NCATE. (A representative of AHA attended NCATE council meetings for three years but found it to be a very frustrating experience; two other professional society representatives rarely appeared at council meetings.) No recent NCATE-related guidelines have been established by the AHA; and the NASDTEC guidelines for the social studies are still in preparation.

Most professional historians have a strong interest in research and publication, but an increasing number are seriously concerned with teaching, and it seems clear that teaching is becoming a major target for AHA activity. At the annual convention of the American Historical Association in January, 1974, several sessions were devoted to such questions as: How can history be made more appealing to students? How can research-oriented Ph.D. graduates learn to deal with the peculiar teaching demands of community colleges where they must increasingly look for jobs? Suggestions for improvement included the use of popular culture motifs in discussion of historical themes, new courses in immediate past history (the last five or ten years), courses in technologic history. The convention also voted preliminary approval to a new constitution including provision for a division "to encourage excellence in the teaching of history in the schools, colleges, and universities," a counterpart of the divisions on research and professional concerns. Yet, in the face of all this encouragement for teaching excellence and innovation, participants in the convention also expressed fears that the appeal to students would erode standards, that interest in the present would undermine interest in the past, and that in another ten years students and their needs might have changed again making current innovations irrelevant for that future time.

AMERICAN PSYCHOLOGICAL ASSOCIATION

Psychology is the discipline which studies human learning. One would expect that the psychologists and their professional society would be in the forefront of education reform activities. A recent report (in which the APA cooperated) to the National Academy of Sciences and the Social Science Research Council, which was designed to gain better financial support and more adequate support systems for the behavioral sciences, emphasized what psychology could do to improve human learning in its account of the goodies which each of the behavioral and social sciences could offer the American public. The description evokes 1984:

> The study of learning offers one illustration of the psychologist at work. Long a topic of interest to the psychologist in the laboratory, whether in lower animals or human subjects, the results today are contributing not only to increased knowledge of brain-behavior relationships, but also to the practical improvement of learning in schools. For example, the age-old problems of the effectiveness of rewards and punishments in learning have led to more precise study of how rewards operate. Studies of reward effectiveness have led investigators in a number of directions. Some, working with animals, have turned to the reward-related areas of the brain; electrical stimulation of some areas of the brain can serve as a reward in the same way that an attractive food does. Some investigators have shown that the effects of reward go beyond the learning of skills that use voluntary muscles; reward can be made to control such visceral activities as heart response or internal secretions in both animals and men. Among other findings, it has been determined that an act rewarded only a fraction of the times that it occurs may prove to be more strongly fixed than one regularly rewarded. Such basic laboratory studies provide the background for some important technological developments in education: programmed instruction and computer-assisted instruction.
>
> Computer-assisted instruction in reading may serve as an example. The experiments to be described lean heavily on what has been learned through the studies of reward and through

studies of memory and perception. In Figure 2-5 we see a child seated at his station (or terminal) with a display screen on his left, a cathode-ray display tube on his right, and an electric typewriter in front of him. He is wearing earphones to receive audio messages. With his electronic light pen he is now following an instruction to select the word describing the picture (a fan) on his left. Behind all this is a computer presenting messages to him, recording his responses, and deciding what he should do next.

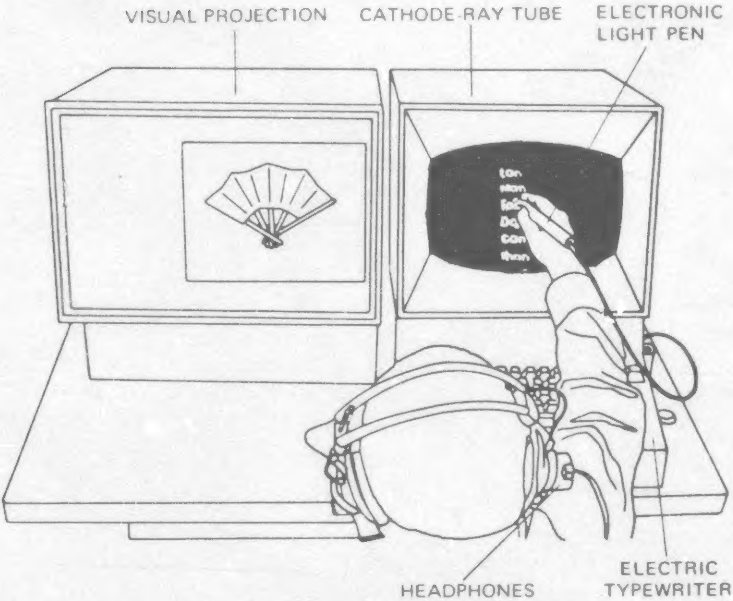
VISUAL PROJECTION
CATHODE-RAY TUBE
ELECTRONIC LIGHT PEN
HEADPHONES
ELECTRIC TYPEWRITER

FIGURE 2-5 TERMINAL FOR COMPUTER-ASSISTED INSTRUCTION.

If the student touches the correct word ("fan"), he will be told of his success and move ahead; if not, he will be helped. [Source: After original photograph courtesy of Richard C. Atkinson, Stanford University.]

> An illustration of what the computer does is given in Figure 2-6, which is related to what is shown in Figure 2-5 but part of a different sequence. Here the learner is being taught to discriminate between the initial and final letters in a three-letter word consisting of a vowel between two consonants. In Part A he is asked for a total response, which, if successful, is "rewarded" by the commendation of Part D. If in Part A he makes an error in the final consonant, the computer sends him to Part C before he returns to Part A. If his error is in the initial consonant he goes first to Part B; whereas if his error is in both, he goes first to Part B, then to Part C, and then back to Part A. When eventually successful in Part A he goes to Part D, where he gets reinforced and moves on to another sequence.
>
> This is but a tiny segment of a very large program, but once the program is prepared and stored in the computer, individualized instruction can be given to very large numbers of children at once. In 1968 when the report from which these illustrations were taken was prepared, as many as 2,000 children were being instructed by this program simultaneously in Kentucky, Mississippi, and California using a single, time-sharing computer based in California.
>
> Usually laboratory studies of learning have been confined to relatively short periods, but computer-assisted instruction is being carried out over several school years so that its actual feasibility will be known. Results already show it to be a good teaching method, and because the computer keeps accurate records, it is also a method of discovering ways to make learning more efficient.[1]

The method is described as only one of thousands of possible applications of behavioristic psychology, computer technology, and systems analysis to human learning which have been tried in the last decade. In fact, most of the hard-line management and efficiency oriented education reform of the

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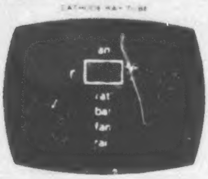
[1] *The Behavioral and Social Sciences: Outlook and Needs,* NAS and SSRC (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969), pp. 43-46.

PART A



Requested Response 1: Touch and say the word that belongs in the empty cell.

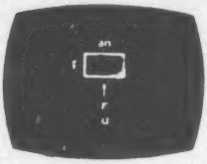
Correct Answer: (Branch to Part D)

Wrong Answer 1: No

rat = final → C → A
fan = initial → B → A
bat = other → B → C → A

Wrong Answer 2: No, touch and say ran (Arrow appears by ran)

PART B

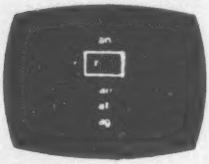


Requested Response 1: Touch the initial unit of the empty cell.

Correct Answer: Good.

Wrong Answer: (Arrow appears above the row letter r) No, this is the initial unit of the cell, so touch this. (Arrow now appears by the response letter r)

PART C

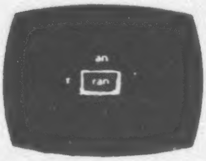


Requested Response 1: Touch and say the final unit of the cell.

Correct Answer: Good.

Wrong Answer: (Arrow appears above the column letter pair an) No, an is the final unit of the cell, so touch and say an. (Arrow now appears by the response letter pair an)

PART D



Requested Response 1: Good you have put ran in the cell. Touch and say ran.

Correct Answer: Good, ran. (Branch to next problem)

Wrong Answer: No, touch and say ran. (Arrow appears above the word ran inside the cell)

FIGURE 2-6 COMPUTER–ASSISTED INSTRUCTION IN READING.

Illustrated are the first steps in a decoding of simple consonant–vowel–consonant words, as explained in the text. [Source: Richard C. Atkinson, "Computerized Instruction and the Learning Process," *American Psychologist*, 23, April 1968, 229. Copyright 1968 by American Psychological Association and reproduced by permission.]

Banneker-Texarkana sort has been developed by psychologists. At the same time, psychology's primary professional society has not been much involved in the politics of the education reform movement, either its hard-line behavioristic wing or its soft-come-on humanistic side. The organization of the APA may suggest why.

Members of the APA are professionals in the field of psychology. They fall into several categories: Members are Ph.D.'s engaged primarily in the advancement of psychology as a science; fellows are members (for at least one year) nominated by their division who have five years' experience as professional psychologists and have made an outstanding contribution to the field; associates are persons with two years of graduate work at a recognized school who are engaged in work or graduate study primarily in psychology or with a master's in psychology from a recognized school plus one full year of professional work in psychology. Associates may vote in association elections after five years of membership, but they may not hold office. The organization is about as explicitly hierarchical as the Prussian army, all "to advance psychology as a science, as a profession, and as a means for promoting human welfare."

APA is not so completely undemocratic as its labels might suggest. The organization is governed by a board of directors, nominated and elected by the membership at large, and a legislative assembly composed of representatives of APA's thirty divisions and of affiliated state associations. While participation in APA's elections is not as substantial as it is in APSA, between 1969 and 1971 35 to 42 per cent of the membership voted in association elections. (APA shows the same falling off of membership interest in association affairs that seems to be occurring in most professional societies, though not to the same degree.) The elected legislative body has full power and authority over association affairs. But much of the society's business is handled at one or two levels removed from the members. The board of directors nominates a member of the association to be its executive officer, and journal editors are nominated by the board of directors and are elected for six-year terms by the electoral board. It requires a petition of 0.5 per cent of the members in good standing to bring any matter of legislation to the attention of the council which then votes on the matter at its next meeting. Upon petition of 1 per cent of the members, a request for mail vote of members may be addressed to the council on any matter not involving amendments to the bylaws; the council must then submit the matter to a vote.

Amendments to the bylaws may be proposed by the council of representatives, the policy and planning board, the board of directors, or by petition of 4 per cent or more of the members; they are adopted by a two-thirds vote of the members. It is not surprising that few highly controversial items come before the APA, and it has not been able to take the strong advocacy stands (even with respect to such questions as violence against children, beating in the schools, etc.) of other organizations serving somewhat similar concerns, such as the American Orthogenic Society.

Changes are in the wind for the entire APA authority structure, however, which is felt to be too old and too massive and not sufficiently responsive to the needs of the membership. The board of directors has proposed an evolutionary program of reforms which would ultimately result in a diversified, decentralized association of individual organizations, each formed according to member needs.

The APA resembles some of the science societies not only in its complex hierarchy, but also in its support base. Membership dues (which range from $40 for associates to $55 for members and fellows, with students paying $7.50) provide only 15 to 20 per cent of the support of APA. About half of the association's revenue (over $2 million) comes from publications. Grants and gifts are another significant factor in the budget, representing about 18 per cent of the total income. The rest comes from interest and other sources. APA's budget in 1970 was over $5 million.

The APA will not be the sponsor of much educational reform. It may be surprising, given its organization, that it has as much going as it has. It is probably no accident that among all the social sciences the discipline of psychology, which often uses a methodology which requires the type of physical measurement and concrete apparatus employed by the physical sciences, also secures the most research grant money of any of the social sciences–over $700,000 in 1968-69, more than $900,000 the year after that, from the National Science Foundation. However, relatively little of that money–$15,000 each year for a visiting scientist program–found its way into programs specifically aimed at improving the teaching of psychology. The greatest part of it went to the development of more sophisticated information services in psychology which have only an indirect relationship to teaching. Nevertheless, there has been some activity in the association directed toward the improvement of the undergraduate curriculum in psychology. Since 1952 there have been three major studies of this curriculum. The first two (in 1952 and 1961) resulted in the conclusion that the psychology curriculum should be designed along the lines of a liberal education, without consideration for individual differences related to job training or graduate school preparation. The most recent report is the result of a study conducted at the Center for Research on Learning and Teaching at the University of Michigan from 1969 to 1972 under a grant from NSF to the American Psychological Association, which also provided for an advisory panel to analyze continuously the results of the study and to submit recommendations to the association. The study was designed to describe undergraduate education in psychology as it actually occurs nationwide and to report on innovations in psychology education. A two-fold approach, involving a broad survey of educational institutions and a series of individual case studies, was used. APA has taken over support of the advisory committee; and, through its educational affairs staff, it is exploring the recommendations and their possible implementation. What contribution this study will finally make to the conduct of undergraduate psychology is still in question, but some interesting conclusions can be found in the Foreword to the report of the study:

> . . . the fact of diversity was perhaps one of the few points upon which the advisory panels agreed, and some important implications of diversity were to emerge.
>
> First, it was recognized that there is no answer to the question, "What does the undergraduate program in psychology consist of?" . . .
>
> Second, diversity and the accompanying freedom to innovate, experiment, and do one's own thing, like any form of liberty, are always possible only in conditions where freedom is allowed. *The potential influence of APA was seen as a threat to this freedom, and it was concluded that the association should not be engaged in the specification of curricula nor in the development of texts or other teaching materials.* [Italics ours.] This conclusion, stemming from intradisciplinary politics, is sufficient to minimize the effects of the investment of the National Science Foundation in science course content improvement at the undergraduate level for psychology.

> Within the framework of constraints on potential activities of the association in the field of undergraduate education, a few major considerations emerged as significant. First of all, there was the recognition that the field of psychology, unlike most other fields, has no well-developed channel for dissemination of information on techniques, methodologies, and new developments to help teachers of psychology do a better job of teaching. A recommendation was therefore made to the education and training board of the association that psychology, possibly through the association, develop a magazine for its teachers. This recommendation is progressing through the decision-making machinery of the association, but its road has by no means been easy.
>
> . . . .
>
> . . . there was expressed an agreement over such matters as the need for APA to examine the problems of the two-year college teacher, and for APA to urge that a teaching practicum be built into graduate training programs. As a result of the recommendation (as well as other forces at work), the education and training board established a task force on the two-year college to identify the particular needs of two-year college instructors and to examine ways to develop better communication between them and APA. There also was the acknowledgement that collected materials on the teaching of psychology should be made available through a central source. The association has since published a source book on the teaching of psychology intended for use by high school teachers, but it is apparent that this source book has also been found useful by college teachers.[2]

No agreement could be reached on actual and potential goals of undergraduate curriculum programs or the design of the "first-year course" in psychology.

Apart from the study of undergraduate curriculum, APA has recently launched a committee on pre-college psychology and is also making a serious effort to cooperate with other professional associations in the social sciences. In 1971 a group of well-known psychologists founded a spinoff organization, the Council for the Advancement of the Psychological Professions in Sciences, designed to increase psychology's influence in public affairs and government agencies and to keep psychologists informed of important legislative developments, particularly as they pertain to funding for research, training, insurance compensation for services, and so forth.

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[2] James A. Kulik, with Donald R. Brown, Richard E. Vestewig, and Jane Wright, *Undergraduate Education in Psychology* (APA, 1973).

As of 1971, NASDTEC standards make no provision for judging psychology teachers. However, APA itself accredits departments in clinical psychology at the graduate level, and there may be pressure to expand that mandate in the future.

JOINT COUNCIL ON ECONOMIC EDUCATION

I. The Management of Economics

Economics displays a somewhat unusual pattern for "upgrading" school teaching in a discipline, a council which sprawls across several professional societies and which belongs to none of them, a phenomenon which can be explained from the perspective of the history of teaching about economics in the United States. The Joint Council on Economic Education is not actually a professional society; yet it is the most powerful organization in the discipline of economics with respect to educational matters. The following statement, which is printed in most JCEE publications (in this or a similar form), is its own public assessment of its nature and its mission:

> The Joint Council on Economic Education is an independent, non-profit, nonpartisan, educational organization incorporated in 1949 to encourage, improve, coordinate and service the economic education movement. Its principal medium for expanding and improving economic education is a network of Affiliated Councils functioning at the state level and Centers for Economic Education on college and university campuses.
>
> The American Association of Colleges for Teacher Education, American Association of Collegiate Schools of Business and American Economic Association are formally affiliated with the Joint Council as are other professional groups within the National Education Association concerned with economic education.
>
> Over the years, the Joint Council has been guided by these primary operational considerations:
>
>> Representative individuals from all segments of the economy, including schools, colleges and universities, help guide all council programs.
>>
>> Programs are designed to stress the goal of objectivity, to be nonpartisan and nonpolitical.

> Program emphasis is on improving teacher and student competence in economic concepts and reasoning rather than any particular philosophy.
>
> Leadership of council programs remains in the hands of the teacher profession so that special needs of the community and its youth are met.

JCEE's reason for being is the appalling ignorance of the American citizenry about economic issues–an ignorance which Jules Henry's "Education for Stupidity" saw as deliberately developed. The ignorance came to be apparent in the forties at a time when economic issues clearly were thought to have a major bearing on the future of a country which had turned from war to trade plans in its world-wide intervention efforts. The underlying cause of ignorance was thought to be the lack of adequate economic texts and education in the schools from the elementary level through teacher training to graduate school Since 1949 JCEE has been trying to improve the quality and increase the quantity of economics taught in American schools through programs involving teacher training, pedagogic research, and curriculum development. It has been supported in this activity by the Committee on Economic Education of the American Economic Association, whose primary concern is for the training of college teachers of economics.

In an effort to be objective and unbiased in its efforts, the Joint Council has recruited its members from all sectors of the economy. It claims that its leadership is in the hands of educators. In 1972 the board of trustees numbered among its members six representatives from labor, three from banks, eight from business associations, five from education associations, ten from college faculties, seventeen from industry and business, ten from college administration, three from farming, seventeen from state and local public school administration, three from national government, and two from Brookings Institution. If one adds to these the members of standing committees not on the board of trustees, the membership breaks down into ten members from miscellaneous sources, forty-nine from business and industry, and forty-five from education (thirteen of whom are teachers) all in colleges or universities. Policy is made only by members of the board. Board members vote all new members onto the board. No one has made an analysis of the spectrum of economic philosophies represented by this board. Critics have characterized it as pretty unlikely to assault the going economic system in the country. Boulding has criticized current economic education generally as being used to "legitimatize existing institutions" even if they are illegitimate. The reform which the council will promote will not be likely to be very revolutionary either in content or in style.

The Joint Council operates chiefly through its network of local Affiliated Councils, now spread across the whole country, which have their own officers, programs, ties with the local school systems, and financial bases. The Joint Council acts as coordinator, clearinghouse, consultant; it supports local programs and offers advice on local application of national programs.

The Joint Council works on both school and college curricula. For example, in the area of undergraduate education reform, Centers for Economic Education have been established at colleges and universities in many parts of the United States and constitute an arm of the Joint Council intended to improve undergraduate economics curriculum, to provide consultation for educational institutions and community organizations in their area, to conduct research in economic education, and to develop curriculum materials. In order to be recognized by JCEE, a center must have budget support from the college, a well defined continuing program, a director in rank at the college, released professional staff time, and a cooperative relationship with the local Affiliated Council. The Joint Council provides centers with a basic library of economic education materials (such as curriculum guides and bibliographies), information on current economic research, and other relevant professional topics and opportunities to attend regional and national conferences sponsored by the Joint Council. The centers are encouraged to develop experimental economics courses, with a view toward their adaptation to other colleges and universities, and to evaluate carefully such approaches for effectiveness, a central concern of the Joint Council. Particular attention is being paid to introductory economics courses.

The most far-reaching education program of JCEE is DEEP (Developmental Economic Education Program) and the associated Cooperating Schools Program. Billed as "the most extensive curriculum change program ever undertaken in social science,"[1] DEEP was based on the theory that successful curriculum change must have relevance to local community needs, broad-based local support, and national research and coordination. It was intended to incorporate more economics into the school curriculum, improve teacher training in economics, develop new curriculum materials, identify successful patterns of curriculum change, and disseminate its findings. DEEP began with a limited number of schools participating in an experimental five-year program and is being continued through the Cooperating Schools Program which continues to take in more schools and school systems and apply to them the ideas and materials that emanated from DEEP. Independent evaluation of the program by the American Institutes for Research and the Psychological Corporation found it to be extremely effective in establishing itself in any school it entered. And out of the program, apart from the various curriculum materials, teacher guides, and tests, came a book called *Handbook for Curriculum Change* which outlines the mechanisms by which economics may be introduced into any school at any level and the effectiveness of the resulting program constantly evaluated. The curriculum materials judged best and most widely applicable are available from the Joint Council, as is a *Checklist of Classroom Tested Materials for the Teacher and Student.* In an effort to evaluate their own program, JCEE discovered that "teachers gained nearly as much from a DEEP program as teachers and college students gained from regularly watching the American Economy television series *(DEEP 1969).*" DEEP actually produced more economics in the schools, a large body of new curriculum material, and a certain amount of teacher training in economics. In its own terms it is probably a success. (A fuller description of the background of DEEP and some observations about its results follow this essay.)

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[1] *DEEP 1969*, p. 7.

JCEE seems to be obsessed with evaluative technique. Several testing instruments have grown out of this preoccupation and out of the various JCEE programs. The Test of Understanding in College Economics is a "before and after" standardized test designed to judge effectiveness of introductory economics courses. Other tests are available for third, sixth, ninth, and twelfth grade students. Moreover, JCEE is cooperating with AEA in the development of a Question Bank of "pretested validated multiple choice questions" to meet a variety of needs.

As one might expect, JCEE programs are heavily supported by the private foundations and by business.[2] Grants from a variety of such sources have made possible other JCEE programs. Sears-Roebuck Foundation has provided for summer fellowships for elementary school teachers and a project to assess the economic content of social studies textbooks. The Calvin K. Kazanjian Foundation sponsored an Awards Program for innovative teachers of economics at all levels; after twelve years, the Kazanjian sponsorship has been taken over by the International Paper Company Foundation. The Alfred P. Sloan Foundation provided the funds for a teacher training program for Ph.D.'s in economics, the aim of which is the establishment of self-sustaining teacher-training programs in economics at the graduate level, supported by curriculum materials and fully evaluated internally. The Joint Council has guidelines which are supported by NCATE, but it has not yet made its effects felt in NASDTEC. Predictably, the 1972 Annual Report of the Joint Council deplores the fact that "Teacher Education in economics is still being restricted by inadequate instruction in state schools of education and by inadequate certification requirements in the states; but we are making progress on both fronts."

The position of the Joint Council on just what kind of economics it would like to see taught is less than clear. It professes a commitment to remain nonpartisan, nonpolitical, objective, and unbiased, to teach economics in its pure form, not under any particular brand name. This seems to be the approach advocated by Kenneth Boulding in a speech at the Grove Park Institute in 1969:

> In the past, economic education, especially that financed by the business community, has not been able to escape a certain implication that it is used to legitimate existing institutions. Legitimating existing institutions is usually all right if the institutions are really legitimate, but then how will we know which institutions are legitimate and which are not? The boundaries are so hard to draw here that it is not surprising that the subject is rarely talked about in economic educator circles. To what extent indeed is economic education in the United States a substitute for the

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[2] USOE has also provided funds for a two-year program to establish a Manpower and Economic Education program in junior and senior high schools, a project designed to orient students toward work and the need for continuing education, a sort of career education project.

> compulsory courses in Marxism-Leninism in the Soviet Union or the compulsory divinity and chapel of an earlier period? The one thing perhaps that has saved economic education is what saves moral education from these deadly and corrupting sins; that indoctrination is fortunately often ineffective, so that the student sometimes learns what he was not intended to learn. . . . The *Comparative Economic Systems* volume in the *Holt Social Studies Curriculum* is an excellent example of what can be done by means of the comparative systems approach to increase the student's self-awareness of his own systems and understanding of other systems, without undermining his basic commitment to his own society. A more universal application of this kind of curriculum indeed would go a long way toward making peaceful coexistence a reality.[3]

The position of JCEE, expressed through the DEEP project in *Whose Economics Should Be Taught in the High Schools?* can be gleaned from the following excerpt:

> To put it bluntly, economic principles, like the facts of life, are what they are. They can be applied in different ways to make up an economic system; but it is the system—not the principles—that we can mold to meet our needs. The system is simply a series of processes, attitudes, moods, qualities, and values. But the system is not a "package" with a fancy ribbon on it; and understanding the system doesn't come about by any memorization of a formula that reduced the economy to an algebraic equation providing a panacea to all the problems the economy faces today. Rather the economy of the United States—referred to as free enterprise, capitalism, mixed economy, or some other term—is our way of getting certain things done by the use of people and things for satisfying our wants through a series of institutions which have been created by the people themselves. If then we accept the economy as something bigger than the individuals who

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[3] *Five Levels of Incompetence,* pp. 45-46.

> are part of it, we as individuals must modify our actions accordingly. An economic system as a whole can't be handed over to people as a "blue plate special," all cooked and served and ready to be eaten; and it can't be arbitrarily altered in a free society just to suit someone's fancy. The economy is a national and international enterprise involving relationships and interactions of all the producing and consuming elements of the community.[4]

We may be able to deduce from this the position that JCEE would oppose a recently adopted Arizona law requiring that the virtues of the capitalistic system be taught in the schools of Arizona.

II. DEEP and the Old Economics

Most respectable disciplines have, in recent years, published an apologia in an effort to secure for themselves a larger share of the school budget or the granting agencies' beneficence or the public's good will. This has been necessary for the disciplines to maintain their individual status and autonomy in an era of shrinking school populations and budgets and an increasing concern for educational accountability and reform. In July, 1960, the Committee for Economic Development and the American Economic Association created the National Task Force on Economic Education, and in 1961 *Economic Education in the Schools* was published. Not surprisingly, the task force found that Americans need to be literate about basic economics in an increasingly complicated world and that, because the educational establishment has not shouldered its responsibility in this respect—as in others—Americans are in fact largely ignorant about everything from how to manage the national economy to how to balance their own budgets. Adequate curriculum materials were lacking; teachers were unprepared. They outlined an inquiry approach to the study of economics as the best method of learning the subject. This method has been described by Edwin Fenton in *The New Social Studies* as follows:

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[4] *DEEP 1969*, pp. 15-16.

Steps in a Mode of Inquiry for the Social Studies

1. Recognizing a problem from data
2. Formulating hypotheses
    a. Asking analytical questions
    b. Stating hypotheses
    c. Remaining aware of the tentative nature of hypotheses
3. Recognizing the logical implications of hypotheses
4. Gathering data
    a. Deciding what data will be needed
    b. Selecting or rejecting sources
5. Analyzing, evaluating and interpreting data
    a. Selecting relevant data
    b. Evaluating sources
        (1) Determing the frame of reference of an author
        (2) Determining the accuracy of statements of fact
    c. Interpreting the data
6. Evaluating the hypothesis in light of the data
    a. Modifying the hypothesis, if necessary
        (1) Rejecting a logical implication unsupported by data
        (2) Restating the hypothesis
    b. Stating a generalization[5]

The JCEE cited the task force report as the best description of what economic principles should be taught in high schools. The list of major concepts and issues that should be covered by high school students is lengthy; however, the task force felt that most, if not all, of the ideas outlined below (as well as others not cited) should be dealt with by the high school curriculum (in varying degrees of depth spelled out in the full report of the task force):

Scarcity of natural resources—the need for economizing
Saving, investment, capital formation
Supply and demand

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[5] Edwin Fenton, *The New Social Studies* (New York: Holt, Rinehart and Winston. Inc., 1967), pp. 16-17.

Principle of diminishing returns
Marketing and competition
Profit and profit incentive
Monopoly and anti-trust laws
Public utilities
Government expenditures and taxes in allocating resources
Balance of payments, balance of trade, tariffs
Corporation structure
Gross national product
Business cycle, depression, inflation
Money and banking
Federal Reserve System
Government budget, fiscal policy, public debt
Economic growth
Underdeveloped areas
Population problems
Personal distribution of income
Labor unions and collective bargaining
Social security, unemployment insurance, and other security measures
The "farm problem"[6]

It should be noted that the basic economics taught is intended to reflect reality in a capitalistic or free enterprise system (the task force prefers the latter term), although the report specifies that: "Every informed American should have a general impression of how other types of economic systems operate, especially communism. Fear of dealing with controversial subjects should not be permitted to exclude objective discussion of this topic from the classroom."[7]

How useful are the task force recommendations? Recall Jules Henry's description of the appalling manner in which the "business cycle" is treated as a "dynamic" process in most economic texts:

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[6] National Task Force on Economic Education, *Economic Education in the Schools*, 1961.

[7] *Ibid.*, p. 61.

There is no elaboration [in *Economics* by Goodman and Harriss] of these statements and the fact that in The Great Depression the "decline" did not stop and would not have stopped had it not been for Government intervention, is not discussed, and the student is left with the general idea that somehow depressions always stop by virtue of the dynamic of the cycle. . . .

[*Consumer Economic Problems* by W. Harmon Wilson treats depressions as natural expressions of the "business cycle."]

> **Decline.** In past periods of prosperity eventually we reached a stage when there was overproduction; the selling of the merchandise became a critical problem. . . .
>
> **Depression.** . . . When business in general is bad, the period is referred to as a depression. In other words, business activities are depressed. In general, depression is considered to be the low point in the cycle. . . .
>
> **Recovery.** Eventually recovery begins. Prices and costs readjust themselves. . . .

On page 679, among "Causes of the Business Cycle" the authors note that, "Purchasing usually lags behind production power. Not enough of the income received from production is put back into purchasing power, and the income from production is not sufficiently widely distributed among all the population to create widespread purchasing power." Yet there is no follow-up on this statement, which clearly implies that if income **were** "sufficiently widely distributed" there would be no "decline" or "depression," and why "purchasing lags" and why income is "not sufficiently widely distributed" are not discussed.[8]

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[8] Jules Henry, "Education for Stupidity," in *Reason and Change in Elementary Education*, 1968), p. 123.

The task force description of depressions and booms is more realistic than that in the textbooks which Henry attacks and conforms fairly closely to Henry's picture of what should be:

> **Booms and depressions tend to feed on themselves because of the interdependence among different kinds of economic activity.** A decline in business investment leads to a fall in income, which causes consumers' expenditures to decline. A rise or fall in the sales of one industry leads to repercussions on the production and sales of other industries, to corresponding changes in income and employment in these industries, and to still further changes in consumers' expenditure and business spending. Students need to be impressed with the fact that this element of dynamic interdependence is a highly important feature of all money-using, private-enterprise economies. . . .
>
> **We now realize much better than we did a few decades ago that government budget policy can play an important stabilizing role in a potentially unstable economy. . . . The difference between the government's tax receipts and its spending represents the government's budgetary surplus or deficit.** A budgetary surplus means that tax receipts are larger than government expenditures; this ordinarily has a depressing effect on total spending. A government deficit means that government expenditures are larger than tax receipts; this ordinarily tends to expand total spending. Thus, the size of the budgetary deficit or surplus affects total spending and the level of total economic activity. This explains why economists are generally agreed that a government deficit may be helpful when private spending declines and a depression threatens, and similarly that a rising budgetary surplus can help to hold back a too rapid expansion in private spending. It is important that we understand, by careful economic reasoning, when it is desirable to have a balanced budget, and when not.[9]

The task force made twelve specific recommendations for the improvement of economic education in the schools, ranging from high school course requirements to teacher training standards to curriculum development. One disturbing aspect of the task force's recommendations is that nowhere do they insist that students be schooled in the basic "nuts and bolts" economics they will need to use every day of their adult lives: budgeting, mortgages, tax computation, interest, consumer protection, etc.

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[9] *Economic Education in the Schools, op. cit.*, pp. 46-47.

DEEP attempts to improve the admittedly unhappy situation the ignorant American citizen-consumer finds himself in. However, it has not produced the revolution in the understanding of economics sought by Barbara Sizemore:

> The public does not understand how Lockheed is subsidized. The intricate workings of the capitalistic mechanisms are hidden from the people. If you discuss capitalism it's taboo. The people of America do not discover that the oil millionaires are subsidized by Congress. They're on welfare; so is Lockheed. So are the expressways on welfare. Once you reveal the basic concepts that order the priorities of the people who are oppressed, they may have second considerations as to whether they wish to support the schools in a new way.[10]

Donald J. Dowd was the DEEP Coordinator for the Dade County School System in Florida. His special perspective on DEEP, also published in *DEEP 1969,* contains the following observations and suggestions about curriculum change in general and DEEP in particular.

> —Begin a curriculum change only when the total cooperation and financial support of the superintendent of schools, his immediate staff, and the board of public instruction has been obtained.
>
> —If possible the local teachers' organization, such as the Classroom Teachers' Association and The American Federation of Teachers should be involved in the planning of the project.

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[10] Barbara Sizemore in *The University Can't Train Teachers* (Lincoln, Nebraska: Study Commission on Undergraduate Education and the Education of Teachers, 1972), p. 121.

—A three-year expanding budget should be approved prior to initiating the project. This should allow for the hiring of not only a coordinator and secretary but should also include staff writers and demonstration teachers. The budget should include additional funds for the purchase of commercial teaching aids and for the development of teaching materials. Other items for budget consideration should be consultant time, travel, postage and publicity.

—An ongoing contract of at least three years should be signed with a local university. This should include both consulting and in-service.

—State and local committees composed of interested citizens should be formed. However, they cannot always be relied upon for adequate financing of the project. If by good fortune this funding does occur, so much the better for the project.

—An adequate incentive program should be worked out for in-service class members. Teachers are reluctant to invest time in educational pursuits which have no immediate rewards. I see no alternatives to either direct hourly wages for time invested or released time from classroom duties.

—Assistance for both planning and administration should be solicited from the Joint Council on Economic Education and its Affiliated Councils on Economic Education. Also, local and state government offices, the U.S. Departments of Labor and Commerce, university and college centers for economic education, school systems with DEEP, interested publishers, private foundations and local civic groups may be enlisted.

—The person chosen to head up the economics program should have the same status as supervisors of other curriculum areas. He or she should know the school system and must have the confidence of top level school administrators.

—A planned publicity program should be formulated by someone knowledgeable in advertising and mass media. This may

> seem slightly unethical to some, but it is the quickest way to obtain needed support from members of the local community and instructional staff personnel.[11]

J. Thomas Hastings, Professor of Educational Psychology at the University of Illinois, has been a consultant to several national curriculum development projects. His contribution to *DEEP 1969* attempts to relate DEEP to other curriculum projects in terms of structure and effectiveness. These are some of his conclusions:

> Whether or not the educationists interested in curricular aspects of education are concerned *per se* with economics education, they should be interested in the purposes, strategies, devices and outcomes of DEEP which has developed its own characteristics differentiating it from other attempts at curriculum change. (p. 81.)

> There is a saying in educational circles that real change in the schools lags twenty-five years behind the introduction of new ideas. Educationists, school administrators and specialists in economic education can learn a considerable amount about the need for and the "absoluteness" of this time-lag by studying the story of DEEP. It would appear from the evaluation in this publication that at least the groundwork for change in the school can be laid in a five-year period if efforts are directed toward involving the local districts and councils for specialist help in the operation. Considering the objectives they had in mind, however, it is certainly questionable whether the Joint Council on Economic Education planners were being realistic when they projected a five-year program. (p. 86.)

In summary then, the Joint Council on Economic Education seems to have adopted a useful, decentralized strategy for educational change. It appears to have helped many schools remedy the worst faults in economic education cited in Henry's "Education for Stupidity." But, in its search for

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[11] *DEEP 1969, op. cit.*, p. 63-64.

'objectivity,' the JCEE may need to work harder to give young people better tools for understanding the proximate and distant economic forces acting on their own lives. In its effort to help people 'understand' capitalism objectively, the JCEE may need to give students better legal, analytic, and organizational tools to deal with the present system's excesses. Practical action based in an economic analysis and developed as part of field work under the "Career Education" rubric—action designed to restructure the work place or give the worker ownership in the organization where he works (the sort advocated in *Work in America* or *Job Power*)—may be what is required next of good economic education.

AMERICAN POLITICAL SCIENCE ASSOCIATION

I. The Management of Political Science

The American Political Science Association is one of the few societies surveyed which not only acknowledges its status as a professional society but is actually proud of its activities as such. And the professional it is most concerned with is the political science teacher. "It shall be the purpose of this association to encourage the study of political science, including public law, public administration and international relations," declares the constitution of the association, as of Winter, 1971. It is clear that APSA takes this responsibility seriously and with some sense for social justice. Among its professional activities on behalf of its members, it lists a placement service that is one of the best among professional societies. In fact, it boasts that it was one of the first such organizations to establish the policy that it is a professional obligation of departments to publish their available academic positions. It is also deeply concerned with enhancing the status of women and members of minority groups with the profession.[1]

It appears that the organization of the APSA is as democratic as it can be and that the actual day-to-day, year-to-year political behavior of the members reflects a will to participate which surpasses that of most of the other professional societies. It should, then, be a society which could act as a fulcrum for democratic educational reform in higher education and the schools.

The membership of APSA consists primarily of college teachers and graduate students, with a sprinkling of secondary school teachers and a fairly substantial number of government officials. The ratio of regular members to students is 56 per cent to 44 per cent, but all members can vote and hold office. APSA members are somewhat more active than members of other professional associations of social scientists; 53 per cent of the members voted in the 1971 APSA election, including 57 per cent of the regular members and 42 per cent of the students. Membership has grown more rapidly than in any other social science professional association in the last decade, and it continues to increase. APSA also has an established "radical caucus," the Caucus for a New Political Science, which was formed a few years ago as a reaction to a range of association policies and still exists within the society, but APSA seems to be one of the professional societies which has been able to institutionalize its dissidents. Surprisingly, APSA has no representative assembly, but the executive director of the association affirms that few major decisions can be made without the vote of the entire membership; and there is also an open business meeting for members at the annual convention. It appears a bit anachronistic that all APSA resolutions are referred to a governing council for its recommendation before submission to a vote of the members at the annual meeting.

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[1] It also publishes a news journal for members (*PS*) which contains news and notes of general interest, as well as articles and reports about the profession and the association.

A complex system governs the selection of officers. The president of the association appoints members of the six-member nominating committee, three per year for two-year terms, and also designates the chairman of the committee. This committee draws up a slate of officers, one for each office. Additional nominations sponsored by ten or more members may be offered from the floor at the annual business meeting. The governing council, which meets two or three times a year, is elected by a vote of the members attending the annual business meeting. The president is elected as president elect and automatically succeeds to the presidency. Managing editors and executive directors are recommended by the president and appointed by the council. Terms are set by the council, and they are renewable. In case of a contest for any elective office, a mail ballot is used. In 1971 a new constitution was proposed which contained one particularly controversial provision: establishment of a thirty-member assembly as the primary policy-making body. The proposal was defeated.

The funding of the organization is as fair as the graduated income tax was intended to be in that membership dues are administered on a sliding scale according to income and range from $10 for students to $30 for members earning $15,000 or more per year. Moreover, income from dues and publications accounts for the major part of the association's budget. APSA received one grant of $29,337 from the National Science Foundation in 1970 for the purpose of international scientific information to cover travel expenses to the Eighth World Congress of International Political Science Associations in Munich. However, that's about the limit of federal support, and no one could accuse APSA of being a government captive at the funding level.

APSA is politically an activist organization with respect to financial support for its own members. Its primary political achievement has been to convince NSF to modify its policies to include political science as an eligible social science for grant purposes, and several NSF and USOE grants for curriculum development projects at all educational levels have followed upon this event. Dr. Evron M. Kirkpatrick, the executive director of the association, was careful to point out that, as a non-profit, educational organization, APSA does not lobby for legislation with Congress or executive agencies (except perhaps in the area of educational legislation and policy). However, if legislation relating to education is before a committee or about to be proposed, APSA is frequently active in trying to influence its design, though not necessarily by means of public statements or testimony. For example, Dr. Kirkpatrick's assistant attempted to introduce more consideration for civics education into a recent higher education bill; and, while the language of the bill was not changed, the staff of the appropriate committee was made conscious of APSA's desires and has taken them into account in the intent of the legislation. APSA keeps in close touch with the government by means of several specific programs as well: the Congressional Fellowship Program (including a foreign affairs fellowship), the Black Graduate Fellowship Program, the State and Local Government Internship Program, the State Legislative Services Program, and the Seminars for Freshman Congressmen.

Several USOE committees (including segments of the Study Commission which sponsored this work) have set down the notion that the in-service teacher ought to be encouraged to take apprenticeships in other community systems, particularly in the systems whose praxis is what the teacher is supposed to represent to young people in bringing them to adulthood. Since about 50 per cent of America's teachers moonlight or have summer jobs in any case, and many are employed by school systems which have sabbatical systems, it seems probable that such systems–if developed–could profit from the experiences of the APSA in developing comparable internship programs.

APSA has recently undertaken a major effort in the area of undergraduate and school education, one of the more exciting undertaken by the professional societies. The Committee on Pre-Collegiate Education was established in 1970 in order to assess the relationship of political science to elementary and secondary education and to develop and begin to implement a program through which the intellectual resources of the discipline could be applied to improving political science education at the pre-college level. A USOE grant was obtained by the committee to fund a special project known as the APSA Political Science Education Project which would support and facilitate its efforts. In its first year of operation the committee discovered that in fact there was no effective relationship between the discipline of political science as it is represented in the halls of higher education and elementary and secondary education and that consequently pre-college political science education, where it exists at all, is a fairly weak link in the academic chain. The committee concluded that, while a single political science curriculum to serve all institutions was probably not feasible, certain basic purposes for pre-college political science education could be outlined: namely, that it reveal to students:

(1) political reality, as well as American democratic ideals;
(2) political behavior and processes, as well as formal government institutions and legal structures;
(3) international and non-American political systems, and that it should develop in students:
    (a) a capacity to conceptualize about political phenomena;
    (b) skill in social science methodology;
    (c) judgmental ability about political decisions and policies;
    (d) judgmental ability about their own political ideology and alternatives to it;
    (e) skill in participatory democracy.

Were all of these steps to be fulfilled, the APSA would have gone a long way toward eliminating education for stupidity. In any case, they are trying. In the light of this effort to demythologize current programs, the committee has made an appraisal of available pre-collegiate curriculum materials, with particular attention to an evaluation of ethnocentrism in the materials. It has developed a strategy for improving political science education throughout the country along the following lines:

(1) development of a support system, composed of a university-based curriculum center, political science departments with special interest in teacher training, political scientists involved in pre-collegiate education, and a national leadership group concerned with pre-collegiate education;

(2) cooperation with other groups involved peripherally in political education, such as AHA, the Afro-American Institute, War Fund, and so forth;

(3) construction of actual political science programs for elementary and secondary schools through curriculum development, teacher training, and study of the political process in the school as an institution.

A fuller description of the work of this committee and the PSEP through June, 1971, in the form of a condensation of the first annual report of the committee, follows this essay.

Dr. Kirkpatrick sees APSA as playing a greater and more significant role in the instructional process in political science in the future, with special emphasis on undergraduate education. This prediction is reflected in a proposal for an NSF grant to establish a Commission on Undergraduate Education in Political Science (CUEPS), the primary aims of which would be to stimulate interest, produce curriculum materials, and disseminate information useful in improving undergraduate political science instruction across the country. The commission would have committees on undergraduate curriculum and college teacher training, subcommittees on the non-major, the two-year college, the black college, and task forces on field work and internships, library requirements, mathematical and statistical training, audio-visual instructional materials, and laboratory and computer-assisted instruction. The proposal also provides for a permanent APSA Division of Educational Affairs. As part of its effort to foster undergraduate reform, APSA also maintains a Departmental Services Program, which provides advice, generally by recommending members of the profession as consultants, to institutions that want to establish a new program in political science or evaluate an existing one.[2] Another aspect of APSA's reform effort is the Teacher Education in Political Science Program (TEPS), which began in 1970 with USOE funding. The TEPS Program holds week-long workshops which are intended to stimulate continuing and lasting change and growth in pre-collegiate political science education. The program was designed to do the following things:

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[2] The Committee on Human Resources, as well as special task forces on graduate education, continuing education, placement, and alternative (non-academic) careers for political scientists, round out the picture of the educational involvement of APSA for the time being.

(1) give participants opportunities to develop understanding of the content and strategy of the "new social studies";
(2) acquaint participants with "new social studies" materials which have ideas and concepts from political science as substantive content;
(3) show through demonstration teaching how to teach new materials to effect real changes in students' attitudes and thought processes;
(4) provide opportunities for participants to examine the structure and methods of the discipline of political science with the aid and instruction of professional political scientists;
(5) help participants learn to examine and assess curriculum materials in an orderly framework, using CMAS;
(6) help participants assess local needs in political science curriculum changes;
(7) help participants develop local implementation of new materials.

In the area of graduate education, APSA established a Committee for an Exploratory Study of Graduate Education in Political Science. In a preliminary report published in the Fall, 1969, issue of *PS*, that committee made the following recommendations and suggestions to APSA and to departments of political science.

Recommendations to the Association

I. In accordance with the conclusion of this committee that graduate students be given greater professional responsibilities, committee recommends that graduate student members be considered for elections to the council and for appointments to committees.

II. In view of the need for continuing evaluation and improvement of the quality of education, the committee recommends the establishment of a standing committee on graduate education comprised primarily of graduate students but including junior as well as senior faculty members. The standing committee's functions should include:

A. The collection and dissemination of student, student-faculty, and faculty reports as well as other pertinent materials concerning departmental changes in program and philosophy; and

B. Careful study of selected areas relating to the quality of graduate education such as: the curricular structure, present evaluation systems, the criteria for the evaluation of faculty performances, especially teaching, and alternative forms of student participation in departmental decision-making.

III. In accordance with the committee's findings that there is a lack of statistical data for the basic institutional unit of the discipline—the department—the committee recommends that the association collect and regularly publish appropriate statistical data from all graduate departments.

Suggestions to Departments

I. In accordance with the committee's conclusion that responsible student participation in department decision-making leads to a more fruitful educational experience and to greater professional competence, the committee suggests:

A. That departments formally include students in all departmental decisions; and

B. That departments aid in securing funds and administrative assistance necessary for the effective operation of student organizations, particularly to enable them to communicate with the members of their own departments and with other departments as well.

II. In accordance with the committee's findings concerning the preparation of teachers and the rewarding of faculty for their teaching efforts, the committee suggests:

A. That departments give greater attention to preparation for teaching for those students who desire it; and

B. That departments give greater attention to teaching in evaluating faculty, and that students be formally included in the evaluation process.

III. The committee suggests that the maintenance of intellectual vitality and the structuring of worthwhile graduate programs require a continual process of reconsideration of goals and reevaluation of departmental programs as they relate to the desired goals. In order to facilitate this process, the committee suggests that departments collect data needed for rational planning and for informed discussion of departmental goals and programs.

IV. In the light of experiments now being conducted in several graduate programs, this committee suggests that departments should consider innovative departures from traditional curricular programs.

V. Given the multiplicity of competing approaches to the explanation of political phenomena, the committee suggests that departments amend their curriculum to include formally organized offerings on political and social inquiry. These goals are useful to graduate programs. They could also usefully be applied in the examination of undergraduate political science.

The major thrust of APSA's educational reform efforts at present is in the area of curriculum development, in which the Committee on Pre-Collegiate Education is supported by NSF. Teacher education improvement projects are moving more slowly, mainly because they have been less well funded. APSA, through this committee, is attempting to approach education in the schools as a political and intellectual process in which teachers and students interact with curriculum materials; this presupposes a dynamic curriculum and teacher training system, not a mandated program which fails to respond to the needs of those who use it. The next effort of the committee will be to stimulate colleges to do prototypical teacher training in political science. Curriculum material for grades 7-12 is already available; grades K-6 will be completed in the next twelve to fifteen months. The committee is seeking a strong APSA commitment to the program it is proposing; and while it has had no real contact with NASDTEC, it has tried to influence that organization. NASDTEC has shown little interest in the committee's efforts, which are certainly of a liberal persuasion. Nevertheless, this APSA committee intends to continue its attempts to work with the other social science professional associations, as well as with NASDTEC and NCATE, despite their apparent lack of interest in its program.

How much influence the association is able to bring to bear on the appropriate agencies, departments, institutions, and people to carry out its objective of promoting political science education at all educational levels remains to be seen; but judging from the record the society has compiled, it is surely a force to be reckoned with.

The society is largely unscarred by the curriculum and teacher training battles of the last fifteen years. It has not sought to control the schools or curriculum or teaching. It seems to have a democratic structure, a constituency willing to move on educational reform, and at least some teachers who are as much concerned with accuracy as with precision, with enlightenment as with self-consciously perpetrated stupidity. The APSA will need encouragement, resources (its own or others), and courage in realizing the sort of political education which it wants to promote. The recent weeks and months of civil turmoil reflected in the media both contribute to such education and make its necessity obvious.

II. *Supplementary Essay V*
a condensation of

FIRST YEAR REPORT OF THE AMERICAN POLITICAL SCIENCE ASSOCIATION'S COMMITTEE ON PRE-COLLEGIATE EDUCATION

The Interrelationship of Political Science and Pre-Collegiate Education*

While a handful of political scientists have devoted a perceptible fraction of their professional lives to research and development work in the area of pre-collegiate education, much of the profession has remained uninterested, ill-informed and frequently contemptuous of what goes on in elementary and secondary schools. Sometimes when moved to take an interest in pre-collegiate education political scientists evidence a deep-seated ethnocentrism. They tend to see public education as a primitive and unhappy society to which they have the responsibility, not unlike the missionary, of bringing the benefits of a superior culture.

This mixture of apathy, ignorance, contempt and arrogance which tends to characterize the professions' model orientation toward the world of pre-collegiate education has its reciprocal in the attitudes of many of the people who populate this world. Many professional educators dismiss political scientists as people of little relevance to them. They see in the discipline very little that is usable in coping with their own professional problems of training teachers, running schools, teaching children, developing curriculum and the like.

Consequences for the Schools

For the schools the most harmful consequences of their isolation from political science is the perpetuation of inadequate programs in pre-collegiate political science education. We use the phrase "political science education" to designate education about human governance and politics. Included is the acquisition of knowledge about the political life of mankind, the development of cognitive skills for processing information about political phenomena, and the cultivation of an understanding of the capacities individuals must possess in order to participate in the civic life of human societies.

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*Ellipsis marks, indicating where a paragraph or more has been deleted, were eliminated in the interests of readability. The paragraphs have been replaced, in some places, by headings (such as this one) for the convenience of the reader.

Obviously political science education in this sense is a very important aspect of formal schooling. Historically, we have looked to the schools as major instruments in the cultivation of civic or political competence. It is hence no trivial matter to judge as inadequate the prevailing modes or patterns of pre-collegiate political science education.

Purposes of Pre-Collegiate Political Science Education

[T]here appears to be a good deal of agreement on a set of basic purposes that should be served by the schools in teaching children and young people about government and politics.

A. Political science education in elementary and secondary schools should transmit to students a knowledge about the "realities" of political life as well as exposing them to the cultural ideals of American democracy.

While schools should not be a birthplace of cynicism or despair about the political life of the society, neither should they communicate to students highly unrealistic and romanticized images of human politics. The existence of conflict, the importance of self-interest, the failures of public policies and political institutions to achieve given objectives, and inequalities in the distribution of political power are examples of political realities which most students readily learn about from one source or another. Schools should provide a learning environment in which students can develop a cognitive understanding of the realities of political life.

B. Political science education in elementary and secondary schools should transmit to students a knowledge about political behavior and processes as well as knowledge about formal governmental institutions and legal structures.

The schools should communicate to students knowledge about the ways in which individuals participate in politics, opinions and information are communicated, decisions are made, leadership is exercised, conflicts are managed, attitudes are formed, etc., as well as knowledge about the formal organization and structure of governments.

C. *Political science education in elementary and secondary schools should transmit to students knowledge about political systems other than the American system, and particularly knowledge about the international system.*

There are two fundamental reasons why students' political education should not be confined to a study of American politics. The American political system can be best understood in comparative context. Moreover, the American system is but one political system impinging upon the lives of contemporary Americans. Increasingly, individuals are participants in a global or international system as well as citizens of their own respective national and sub-national societies. Hence, pre-collegiate instruction about politics and government should develop within students both a comparative understanding of American politics and a knowledge of the international or global system.

D. *Political science education in elementary and secondary schools should develop within students a capacity to think about political phenomena in conceptually sophisticated ways.*

For example, a student who can think conceptually about a political event such as the American Revolution can view this particular revolution as one member of a larger population or set of events called revolution. At even a more abstract level, the student can think of revolutions (including the American Revolution) as a sub-class of a more general set of phenomena called political change. At the same time the student can locate the American Revolution in a general class of events and these in turn in a still more general class, he can discriminate the American Revolution from the French Revolution, the Mexican Revolution, the Russian Revolution, etc., and distinguish revolutions from other forms or processes of political change.

E. *Political science education in elementary and secondary schools should develop within students an understanding of and skill in the process of social scientific inquiry. . . . [Essentially this implies an ability to develop evidence and reason clearly about social problems.]*

F. *Political science education in elementary and secondary schools should develop within students a capacity to make explicit and analyzed normative judgments about political decisions and policies.*

Normative judgments about political decisions and policies are claims about the goodness or badness, the desirability or undesirability, the appropriateness or inappropriateness of these decisions or policies. Normative judgments contain two major elements: value claims and performance claims. Value claims are assertions about the quality, characteristics, or properties in terms of which a given phenomenon is to be judged, appraised, or evaluated. Performance claims are assertions that the phenomenon in question has or does not have the desired qualities, characteristics, or properties. . . . [By an ability to make explicit and analyzed normative judgments is meant the ability to identify and distinguish between value and performance claims and to examine the validity of those claims.]

G. *Political science education in elementary and secondary schools should develop within students an understanding of the social psychological sources and historical-cultural origins of their own political attitudes and values, and a capacity to critically analyze the personal and social implications of alternative values.*

A student with such an ability, for example, could perceive the relationship between placing a high value on private automobile ownership and problems of traffic congestion and air pollution in urban areas.

H. *Political science education in elementary and secondary schools should develop within students an understanding of the capacities and skills needed to participate effectively and democratically in the life of the society.*

[This includes:] (a) an interest in public affairs and some sense of "public regardedness;" (b) an ability to tolerate conflict and divergent values and beliefs; (c) an ability to consider in particular situations the democratic basis, the feasibility, and the likely consequences of alternative courses of action; (d) an ability to look at the viewpoints and problems of others; (e) an ability to identify alternative courses of action and to assess the probability that the alternative selected will achieve the desired goals; (f) an ability to consider group factors and institutional implications of decisions; (g) an ability to consider relevant democratic principles and values involved in decisions.

[Extensive research on the part of the committee led to the following conclusions about current political science instruction at the pre-collegiate level:]

A. *Much of current political science instruction in elementary and secondary schools transmits a naive, unrealistic and romanticized image of political life which confuses the ideals of democracy with the realities of politics.*

Materials at both the lower (grades 1-3) and upper (grades 4-6) elementary level have not dealt with the question of racial discrimination or the civil rights movement with much accuracy or sophistication. While most of the current textbooks make some effort *pictorially* to depict blacks as an integral part of American life they present virtually no *textual* materials dealing candidly with the issue of present racial discrimination and the current status of blacks in American society.

At the explicitly governmental level, upper elementary materials present an image of American politics and government comprised principally of the Constitutional Convention, Presidents Washington and Lincoln, and the federal government as a sort of "benevolent Santa Claus providing helpful services such as building roads, dams and parks, conserving wildlife, providing for the national defense, and protecting consumers, farmers and workers."[1] Few textbooks or other materials satisfactorily interpret American government and politics in terms of a realistic appraisal of governmental functions and processes and the relation of governmental leaders and the formulation of public policy to citizens, public opinion and interest groups.

This weakness is found in almost all the widely used secondary level textbooks in civics and government upon which teachers place strong, almost obsessive, reliance. Massialas in reviewing six of these texts found that they confuse what *is* with what *ought* to be.[2] The following is representative of the way in which the concept of democracy is treated in such texts. "Democracy provides the individual with greater security and personal satisfaction. In a democracy the dignity and worth of the individual are recognized. . . . All are equal before the law . . . and have the law's protection."[3] Massialas further found that all the texts he reviewed assumed the American political system actually operates on the principle of the consent of the governed. Thus, texts were filled with statements such as, "In our nation government has been organized to serve the people and to provide for the general welfare of all citizens. We will learn very shortly that all levels of government are responsive to the wishes of the people."[4] While consent of the governed is a genuine American ideal, it is simplistic and misleading to assert as fact that it accounts for political and economic behavior in daily life.

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[1] Robert J. Goldstein, "The Elementary School Curriculum and Political Socialization" (unpublished master's thesis, Department of Political Science, University of Chicago, undated), p. 40.

[2] Byron G. Massialas, "We Are the Greatest!" in *Social Studies in the United States,* ed. by C. Benjamin Cox and Byron G. Massialas (New York: Harcourt, Brace and World, Inc., 1967), p. 178.

[3] *Ibid.,* p. 179.

[One] study revealed that a large number of . . . students were unable to distinguish American ideals about political opportunity and recruitment to political office from political reality. For example, on a true-false test 41 per cent of the sample indicated as true the statement that "Any person born in the United States has the same chance as any other person to become President of the United States some day." And 42 per cent indicated as true the statement that "Non-white individuals have the same chance to become United States Senators as white individuals."[5]

This romanticized and unrealistic view of American politics tends to be presented in an antiseptic context which ignores controversial issues and glosses over crucial matters of public policy such as protest and dissent, racial discrimination, hard-core poverty, corruption, laws governing drugs, birth control, pornography and the like.

Historical Emphasis

B. *On the whole, instruction about civics and government places undue stress upon historical events, legal structures and formal institutional aspects of government and fails to transmit adequate knowledge about political behaviors and processes.*

[Beyond discovering that much textual material is designed mainly "to inculcate feelings of patriotism and loyalty," the committee found that most materials] do not venture beyond statements such as the following found in a widely used fifth-grade text, "The Congress was to make laws. The President was to be the head of the nation and see that the laws were obeyed. The courts were to settle disputes and judge people."[6] Completely absent from these materials is any conception of politics as involving power and influence, the allocation of values, social direction, the resolution of conflict, and the like. Also absent is any conception of government and politics as subject matter of scientific inquiry.

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[5] John J. Patrick, "The Impact of An Experimental Course, American Political Behavior, On the Knowledge of Secondary School Students," (paper presented at the 66th meeting of the American Political Science Association, Los Angeles, California, September 8-12, 1970), pp. 11-12.

Ethnocentrism

C. *On the whole, instruction in civics and government reflects an ethnocentric pre-occupation with American society and fails to transmit to students an adequate knowledge about the political systems of other national societies or the international system.*

Explicit reference to foreign nations and peoples in the majority of elementary materials begins about fourth grade. In these materials similarity to the United States--primarily in terms of industrialization and democracy--is used to judge countries. Those nations conforming closely to the United States along these lines receive preferential treatment in terms of evaluative statements of cultural characteristics and general warmth of treatment. . . . Correspondingly, in the majority of materials, third world nations are generally treated rather harshly and inaccurately.

Communist nations receive the harshest, most distorted and at times definitely hostile treatment. Much of the distortion in the treatment arises from omission rather than commission and makes it impossible for students to make balanced judgments regarding Communist and non-Communist political systems.

The ethnocentric tendency of civics and government texts is also reflected in discussions of the American economic system. The *leading*, most widely used 12th grade civics and government text thus unabashedly states:

> One needs only to look at the great achievements and the standard of living of the American people to see the advantages of our

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[6] Goldstein, "Elementary Curriculum," quoting C. VerSteeg, *The Story of Our Country* (Evanston: Harper and Row, 1965), p. 177.

> economic system. We view the trends toward nationalization and socialism in other countries with grave misgivings. We believe that a well-regulated capitalistic system—one of free choice, individual incentive, private enterprise—is the best guarantee of the better life for all mankind.[7]

Moreover, high school texts provide only superficial treatment of international politics, the behavior of the United States as an actor in the international system and the sources and relationship of public opinion and American foreign policy. Most textbooks, if they treat the topic at all, limit themselves to one or two chapters setting forth the history and formal organization of the State Department and the United Nations.

Neglect of Theoretical Techniques

D. *On the whole, instruction about civics and government fails to develop within students a capacity to think about political phenomena in conceptually sophisticated ways; an understanding of, and skill in the process of social scientific inquiry; or a capacity to systematically analyze political decisions and values.*

Joyce notes that:

> In the view of many school administrators (and teachers) *primary social studies are not intended to be intellectual.* Textbooks in social studies and science are expected to reinforce the reading curriculum and not to interfere with the skill subject by introducing too many difficult ideas from the social sciences. Truly intellectual inquiry in social studies would actually be subversive to the purposes of the primary grades as seen by many school admin-

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[7] McClenaghan, *American Government,* p. 17. The text, however, excludes any discussion let alone analysis of the economic development and social well-being of people in England and Scandinavia. Further, the discussion of socialism is conveniently followed by a discomfiting picture of a child in a dentist chair as an illustration of socialized medicine. This, however, probably represents an improvement over the 51st edition where the same discussion was followed by a picture of English people standing in line in the rain waiting to be treated by the National Health Service! The message, of course, is clear—socialized medicine is undesirable and leads to certain hardships.

istrators. (Emphasis in original.)[8]

In reporting the results of their exploration of what is currently being done in the development of elementary and secondary civics and government materials, the APSA Committee on Pre-Collegiate Curriculum Development in Political Science found that:

> The end-of-chapter questions and suggested activities that appear in civics and government textbooks emphasize the memorization of facts about government as the key to understanding political affairs. Students are asked to recall or to copy from the textbooks such information as the precise legal steps by which a bill becomes a law, the legal qualifications for becoming President, or the exact wording of the Preamble to the Constitution. Seldom are students confronted with issues, instructed in the methods of inquiry, or motivated to use facts effectively to substantiate or refute political beliefs.[9]

Finally, civics and government texts emphasize the prescription of "correct" political values and fail to equip students to make normative judgments based upon a critical appraisal of the sources of their values and an understanding of the implications of operationalizing these values. The textbooks are satiated with moralizing prescriptions about the superiority of democracy and the attitudes and values every citizen ought to have. This prescriptive approach along with rote-like end of chapter exercises preclude systematic, rational attempts on the part of students to clarify their own value positions and examine problems and dilemmas created by the clash of values in American politics and society.

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[8] Bruce R. Joyce, "A Review of Textbook Materials" in *Social Studies in the United States*, ed. by C. Benjamin Cox and Byron G. Massialas (New York: Harcourt, Brace and World, Inc., 1967), p. 27.

[9] Committee on Pre-Collegiate Curriculum Development in Political Science, Report of the Committee, "The Challenge of Pre-Collegiate Education," *PS* (Summer, 1969), pp. 339-40. This Committee was appointed in the Spring of 1969 by then President of the Association Professor David Easton. The Committee was charged with studying efforts to improve pre-collegiate political science curriculum already underway, and to identify needs and priorities for future curriculum development. The Committee members were: Paul Abramson (Chairman), Lee F. Anderson, Charles O. Jones, Howard Mehlinger, Jewel Prestage, George E. Von der Muhl, and L. Harmon Ziegler.

Neglect of Practical Citizenship Training

E. *On the whole, instruction in civics and government fails to develop within students an understanding of the capacities and skills needed to participate effectively and democratically in politics.*

Elementary level textbooks and other course materials, particularly those in grades 4 to 6, place considerable emphasis upon "citizenship training." Much of this material is hortatory in nature confusing prescription and description. In essence, the message conveyed is that the good citizen is one who "understands and appreciates the American 'way of life,' is proud of his country and understands and tries to perpetuate democracy."[10]

Hess and Torney in a study of 12,000 elementary school children and their teachers report that:

> Compliance to rules and authorities is a major focus of civic education in elementary school. . . . Indeed, it seems likely that much of what is called citizenship training in the public schools does not teach the child about the city, state, or national government, but is an attempt to teach regard for the rules and standards of conduct of the school. . . . The school focuses on the obligation and right to vote but does not offer the child sufficient understanding of procedures open to individuals for legitimately influencing the government. Nor does it adequately explain and emphasize the importance of group action.[11]

[Several studies have indicated that American high school students display neither a serious commitment to democratic ideals nor an adequate decision-making capability, and they lay the blame largely at the door of social and political science education.]

The formal curriculum, however, is but one aspect of school. **A** number of researchers have noted that the social climate, and political culture and organization of schools and individual classrooms—the "unstudied curriculum"—is importantly related to the development of students' political orientations.[12]

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[10] Goldstein, "Elementary Curriculum," *op. cit.*, p. 44.

[11] Robert D. Hess and Judith V. Torney, *The Development of Political Attitudes in Children* (Garden City, New York: Anchor Books, 1968), p. 248.

A host of commentators have noted that in the majority of American schools the professed objectives of the schools concerning democratic ideals are inconsistent with the way the schools are actually organized and run. On the whole, American schools emphasize: docility and conformity on the part of students rather than activity and critical thinking; strict adherence to authoritative pronouncements as opposed to student inquiry into pressing socio-political problems, and strict obedience to rules as opposed to the inquiry into the need for and purpose of rules.[13]

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[12] See, for example, John J. Patrick, *Political Socialization of American Youth* (Washington, D.C.: National Council for the Social Studies, Research Bulletin No. 3), pp. 27, 44. Howard D. Mehlinger, "The Study of American Political Behavior," (Occasional paper from the High School Curriculum Center in Government, Indiana University, 1967, mimeographed). Richard E. Dawson and Kenneth Prewitt, *Political Socialization* (Boston: Little, Brown and Company, 1969), pp. 155-75. Gabriel Almond and Sidney Verba, *The Civic Culture* (Princeton: Princeton University Press, 1963), pp. 352-63. Robert Havighurst and Bernice Neugarten, *Society and Education* (Boston: Allyn and Bacon, Inc., 1962), p. 185. Helen Sonnenburg Lewis, "The Teen-age Joiner and his Orientation Toward Public Affairs: A Test of Two Multiple Group Membership Hypotheses (unpublished Ph.D. dissertation, Department of Political Science, Michigan State University, 1962).

The broader literature on socialization also contains references to the relationship between the school and individual classroom culture and the formation of students' political attitudes and beliefs. See, for example, John J. Patrick, "The Impact of Civics Intruction on Political Attitudes and Beliefs," *The Challenge: Colorado Council for the Social Studies,* XXIII (Spring, 1970), 34-40; John A. Clausen, "Perspectives On Childhood Socialization," in *Socialization and Society,* ed. by John A. Clausen (Boston: Little, Brown and Company, 1968), 130-82; O.J. Harvey, B.J. White, M. Prather, R.D. Alter, and J.K. Hoffmeister, "Teachers Belief Systems and Preschool Atmospheres," *Journal of Educational Psychology,* 57 (1966), 371-81; Lee H. Ehman, "An Analysis of the Relationship of Selected Educational Variables With the Political Socialization of High School Students," *American Educational Research Journal* (November, 1969), 559-80; Ronald Lippit, "Improving the Socialization Process," *Socialization and Society,* ed. by John A. Clausen (Boston: Little, Brown and Company, 1968), 321-75; Eleanor E. Maccoby, "The Development of Moral Values and Behavior in Childhood," *Socialization and Society,* 227-70; Stanley E. Dimond, "Studies and Projects in Citizenship Education," in Franklin Patterson, ed., *The Adolescent Citizen* (Glencoe, Illinois: The Free Press, 1960), p. 93; Bernard Berelson and Gary A. Steiner, *Human Behavior: An Inventory of Scientific Findings* (New York: Harcourt, Brace and World, Inc., 1964), p. 439.

The emphasis upon compliance and docility in American schools is a manifestation of their preoccupation with efficiency, order and control and is operationalized in terms of seemingly petty regulations regarding dress, silence, movement and the like which have implications for civic education. Westin summarized the results of his study of almost 7,000 high school students in a statement worth quoting at length:

> The principal findings of the survey are that a large majority of the students feel they are regularly subjected to undemocratic decisions. These are seen as unilateral actions by teachers and administrators that deny fundamental rights of persons to equality, dissent or due process, and of members of an institution to some meaningful share in its rule-making processes. Students feel that the results of the dilemma situations are bad, and report increased levels of dissatisfaction, tension, frustration and anger with school as a whole, the survey finds that a majority of these students perceive their schools to be essentially undemocratic institutions.[14]

Consequences of Isolation for the Discipline

First, and perhaps foremost, political science's isolation from the processes, institutions, and problems of elementary and secondary education has left the discipline's ancient interest in political education underdeveloped and unexploited. That is, it seems reasonable to assume that isolation has substantially reduced the capacity of the profession to produce new knowledge about one of the very significant dimensions of human political behavior.

Moreover, isolation from schools has reduced the opportunity for the discipline to use educational systems as laboratories or observatories in which to empirically examine many basic political processes and problems. For example, the cases of decaying political order and the emergence of new forms of order in many urban schools present political scientists with the opportunity to systematically and comparatively examine a phenomena of basic interest to the discipline.

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[13] John J. Patrick, "Implications of Political Socialization Research for the Reform of Civic Education," *Social Education,* 33:1 (January, 1969), p. 19.

[14] Allen Westin and Dean Murphy, "Civic Education in a Crisis Age: An Alternative to Revolution and Repression," (mimeographed, September, 1970), pp. 2-3.

Remedies

The growing crisis in the schools encourages a search for relatively radical alternatives to traditional institutions and inherited practices. And the intimate link between the process of education and the basic dynamics of human development encourages normatively oriented research and the construction of social theory cast in a broad humanistic frame.

For the discipline to substantially effect change in political science education at the pre-collegiate level there must be developed:

(1) within the profession institutional and cultural support for involvement in educational research, development and service activities. [This would include:]

   (A) a national network of university-based research, development, and service centers. . . . The development and maintenance of up-to-date and specialized collections of instructional materials, the providing of experienced and skilled consultants, the monitoring and coordination of research, the creation and maintenance of long-term and comprehensive relationships with entire schools or school systems, and the development of interdisciplinary programs are a few of the activities that are best undertaken by university-based centers which inter-link political science departments, colleges of education, and schools. [The committee has supported creation of new centers and strengthening of existing ones.]

   (B) a cluster of political science departments with a special interest and organizational commitment to teacher education.

   (C) a sub-culture or sub-discipline of political scientists professionally interested and involved in research, development, and service activities in the field of pre-collegiate education. . . . [T]he creation of a new journal in political education is being considered. This journal would provide an important channel of communication among the growing numbers of political scientists engaged in research, development, and service activities in the field of pre-collegiate education.

(D) national leadership and staff assistance. . . . Currently this leadership is provided by the Committee on Pre-Collegiate Education with staff assistance from the Political Science Education Project.[15]

(2) a network of collaborative relations with other groups and institutions involved in educational reform. . . . [P]olitical science shares with the other social science disciplines an interest and stake in the overall quality of social studies education, since the quality of instruction about politics and government is not independent of, or separate from, the quality of instruction about other aspects of human behavior. Hence, a very important dimension of the Committee's work is that of furthering interdisciplinary collaboration. Several small steps have been taken [already] . . . .

(3) a set of coordinated research, development and service programs aimed at both elementary and secondary education and designed to effect change in curriculum, in teacher education, and in the social organization and culture of schools. . . . [T]here is some tendency and temptation to look upon secondary schools as the discipline's major sphere of interest and to define elementary education as falling outside that sphere. In the judgment of the committee this is a mistake. If the discipline is to affect substantial change in pre-adult political education, the profession must concern itself with social education in elementary schools as well as in secondary schools. A good deal of political socialization research suggests that a considerable amount of political

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[15] In August, 1974, this committee published the second edition of *A Directory of Political Education Resources,* a reference work of written materials, ongoing projects, university centers, and individual political scientists that might be helpful in political science education.

> learning occurs before the time when most students are first exposed to formal courses about politics and government in junior or senior high schools. . . . [I]n the judgment of the Committee the interests of the discipline extend beyond a concern with formal curriculum. Political science has an interest in schools viewed as total institutions. The political science education of children and adolescents appears to take place within the overall institutional context of schools. This context includes the characteristics and behavior of teachers as well as the characteristics of formal instructional materials. In addition to curriculum materials and teachers, students' learning appears to be shaped by the social organization and culture of schools. Thus, the Committee believes that the political science profession should develop programs aimed at effecting change in each of three major areas: (a) curriculum, (b) teacher education, and (c) the social organization and culture of schools. . . . The discipline's growing interest in basic research in children's political learning and in the politics of education is a very important dimension of its relationship to precollegiate education. For the profession to make a significant long-term contribution to improve political science education these basic research interests must be further developed and expanded to cover aspects of the process of education and the operation of schools which are not adequately studied today. Moreover, the gap that separates the production of basic knowledge and the utilization or application of this knowledge to educational problems must be shortened. . . .

Curriculum Change

In the judgment of the committee there is no single K-12 political science curriculum which all schools should adopt and to which all students should be exposed. Differences in student experiences, abilities and needs, the wide variations in educational practice and philosophy from district to district, the disparate expectations of teachers and school administrators, the tradition of local autonomy, [and the rate of social change] are a few of the factors which mitigate against the development of one single K-12 curriculum in political science. . . .

Another option open to a discipline is the development of one course, usually at the secondary level, which serves as the discipline's "official" representative in pre-collegiate curriculum. For example, in the case of political science, the discipline might develop a course in political science designed to be inserted into the slot which is now occupied in many schools by an eleventh or twelfth grade course in American government. In the judgment of the committee this course of action is possible but not entirely desirable.

Unlike some of our sister disciplines in the social sciences, political science does not face the task of establishing a beachhead in the schools or carving out for itself a new piece of curriculum real estate. Instruction about things political permeates the existing social studies curriculum. . . .

The problem lies in the fact that on the whole, the discipline's interest is poorly represented in the sense that there is not an adequate supply of high quality instructional materials for teaching about politics and government at either the elementary or secondary levels. . . .

In the judgment of the committee, the goal of curriculum development activities undertaken by the political science profession should be the creation over the next five to ten years of a constantly expanding pool of instructional materials of various types and forms usable in a variety of contexts and ways. On the whole this pool of teaching-learning resources should consist of a large number of relatively short and inexpensive "units" of varying format.

These "units" should be designed to be used in two primary ways. The units could be combined to form new courses of varying length (e.g., a six-week course on war and peace, a semester course on political change, etc.). The units could also be used separately to supplement, enrich or replace a particular part of existing courses in civics, American government, problems of democracy and history. . . .

Teacher Education

There is obviously no easy way to provide teachers, prospective or experienced, simultaneously with a systematic study of social science, a knowledge of relevant instructional materials and teaching strategies, and some actual teaching experience, but this is the challenge. To meet it requires that political scientists develop and teach in special programs designed for teachers and that they also develop instructional materials in political and social analysis especially designed to teach those whose job it is to teach others.

The Social Organization and Culture of Schools

Schools are not simply places in the social environment where children interact with instructional materials and teachers. They are social institutions or systems occupying a given physical space and having a structure, culture, and pattern of governance. Since there appear to be many characteristics of schools as physical plants and more importantly as socio-cultural political systems which serve to either encourage or discourage desired social learning, the profession must interest itself in schools as institutions.

This dimension of the discipline's interest in pre-collegiate education is particularly important and salient at the present time because of the institutional changes that are beginning to occur within schools.

In collaboration with educators and other social scientists, the discipline should seek to develop a political sociology of educational change and of alternative modes of organizing and governing educational institutions. Such a field of inquiry would provide decision makers with alternative conceptual models of the social organization, culture and governance of schools along with empirically grounded data on the impact on human learning of different kinds of schools. This expanding fund of conceptual analysis and empirical research should be made available to school administrators, school board members, teachers and parents through a variety of media tailored to these audiences. Moreover, a large number of political scientists should acquire the skills and knowledge needed to effectively consult or otherwise assist schools which are seeking to change themselves.

ASSOCIATION OF AMERICAN GEOGRAPHERS

Geography is a discipline which might not exist were it not for the schools. At least, for years the geography departments of the country were mostly involved in teacher training, and geographers continue to debate how their efforts differ from those of cultural anthropologists and other earth scientists and even various sorts of historians or economists. The Association of American Geographers is, according to its publicity leaflet, a national, scholarly, non-profit organization whose purpose is "to advance professional studies in geography and to **encourage the application of geographic research in education, government, and business.**"

Membership in AAG is democratically open to any person interested in that purpose, and dues are comparable to that of most professional societies. For their effort, members receive several publications, including *Annals* (AAG official research journal), *The Professional Geographer* (membership forum), *Proceedings* (papers from annual meetings), *AAG Newsletter* (information about grants, meetings, and society projects), *Jobs in Geography* (employment service), and other publications at reduced rates. AAG somewhat resembles the American Chemical Society or the NEA in that it is more like a lobby or guild than it is like a society dedicated exclusively to the pursuit of knowledge. Other benefits of membership include research and travel grants, group insurance, professional meetings, and professional contacts which may lead to communication opportunities and enhancement of career potential. In other words, AAG is essentially a "political" professional organization having some scholarly and educational interests. AAG projects are heavily supported by NSF and USOE.

The governance of AAG is not such as to encourage any rapid education reform effort. The society practices what is, at best, an indirect democracy. The governing body of AAG is a council which is composed of five elected officers, six elected councillors-at-large, and nine councillors appointed to represent each of the nine regional divisions of the association, each of which has its own officers and program. Officers and councillors are nominated by a nominating committee as a slate; additional nominations may be made by any ten members of the association up to one week prior to the election, conducted by mail ballot of the membership. The council conducts all business of the AAG and is the major policy-making body of the association; all official activities of AAG are subject to the approval of the council and are monitored either by steering committees or by the council itself. The council appoints an executive director of the association, who is the chief administrative officer overseeing all phases of AAG activities, and a full-time educational affairs director, whose major task is to deal with all the educational activities of AAG and to serve as liaison with the educational efforts of other associations in geography and the other related social and physical sciences.

Despite its somewhat cumbersome and elitist structure, AAG is not above trying to reform education. It has sponsored several projects which deal with geography in its educational context, from the standpoint of both curriculum development and teacher training. Since the chief strength of geography in institutions of higher education has been in teacher training institutions, AAG's interest in that aspect of education is quite natural. However, among AAG's educational projects are the Commission on Geography and Afro-America (COMGA), the Commission on Geographic Education (COMGED), the Commission on College Geography (COMCOG), the High School Geography Project, the Task Force on Graduate Education, and the Visiting Geographic Scientist Program, some of which appear to be pretty useful education reform enterprises.

The Commission on Geography and Afro-America, perhaps the most ambitious project of AAG, was formed to improve the quality of geographic education at predominantly black colleges and universities and thereby to insure that more and better black geographers would be trained. It was hoped that this might have the additional benefit of improving geographic education in black schools at lower levels. The project included a fellowship program, a Leadership Conference, a summer program, and a clearinghouse for information about geographic pedagogic practices and the status of blacks in the profession. The fellowship program placed qualified students from black schools in graduate programs at major universities to prepare them to return to teach at their black colleges and thereby to upgrade the quality of geographic education at those schools. The aim of the Leadership Conference is to expose teachers at black colleges to current research in geography (since many of these teachers cannot attend national or regional conventions). At such conferences teachers from common situations can seek solutions to mutual problems. COMGA encourages geographers from major universities to speak at black schools and establish ties with them. The expectation is that high schools will ultimately be affected by summer workshops offered for teacher trainers at black colleges. Finally, the COMGA Research Panel has encouraged the publication of geographic research on black America, partly as a public relations tool to convince black college administrations to invest in their geography departments. An internship program was attached to the fellowship program in an effort to develop leadership qualities in trainees and to help students to "sharpen their pedagogical skills" (Director's Report, 1972); some of the tools most frequently used for this purpose were summer workshops and promotional work for COMGA. COMGA is funded by USOE.

The Commission on Geographic Education, less directly tied to social concerns than COMGA, is the overseer of geographic education at all levels, from the improvement of undergraduate college teaching through high school to modernization of elementary school geography teaching. This commission has done most of its work through conferences of college geography teachers. The first series of four conferences focused on "The Improvement of College Teaching," with emphasis on the role of the college teacher as teacher-trainer and on exchange of ideas about innovative teaching strategies. A second series proposed to look into the competencies required for successful college geography teaching. The USOE supported these conferences with grants. A series of teacher handbooks for the elementary schools is under consideration.

The final college reform group is the Commission on College Geography which began its work in 1963 under a grant from NSF, a grant which continues to pay all development and publishing costs of its publications. The commission's major objectives were to attempt to integrate geographic programs into the broader college curriculum, to find ways to incorporate recent research into existing curriculum materials, to advise institutions and individuals on how to strengthen the geography curriculum, and to investigate and improve the effectiveness of undergraduate programs and individual courses. The commission has developed an extensive publication program to partially meet these objectives and especially to shorten the gap between current research and textbook incorporation cheaply and quickly. There is a Regular Series of pedagogically-oriented publications designed for use by college instructors. *The Resource Papers* are supplementary textual material dealing with current research and designed for use by both students and instructors, particularly teacher trainees. *The Technical Papers* can be used by college geography instructors as models for modifying their course content and approach, e.g., Computer Assisted Learning Units. The commission also sponsors series of Summer Institutes for College Teachers of Geography which are supported by NSF and/or USOE, as well as special Institutes for Geography Teachers in Two-Year Colleges. Through this commission AAG has gotten into the consulting business, advising institutions with no program in geography or only a very limited one on how to develop or upgrade their geography curriculum. Various panels of the commission are responsible for preparing resource and technical papers, developing units on computer-assisted learning in geography and environmental education, studying the problems of two-year colleges, exploring (with COMGED) the contribution which undergraduate geography may make to pre-service teacher training and helping institutions to use undergraduate geography in the best possible way as a teacher education tool (along somewhat modified TTT lines), and evaluating the commission's activities.[1] Members of the Commission on College Geography are appointed (for a term of three years) by the AAG Council to represent major sub-disciplines, various sizes of institutions, and a geographical cross-section of the U.S. and Canada. In fact, the overwhelming majority of commission members come from some of the largest universities in the country. One of COMCOG's recent publications, *Metropolitan Neighborhoods: Participation and Conflict over Changes,* illustrates geography's growing concern and involvement with local and regional planning issues.

Through the High School Geography Project, the AAG has worked closely with high school teachers since 1961 to develop and classroom-test new curriculum materials for high school geography courses. These materials are activity-centered and propose projects dealing with site selection for a city, land apportionment and zoning within a city that is growing, the development of relationships between cities, and optimal location of manufacturing industries. The chief result of this effort is "Geography in an Urban Age," an inquiry-oriented, ninth-grade course which covers the topics: Geography of Cities, Manufacturing and Agriculture, Cultural Geography, Political Geography, Habitat and Resources, and Japan. *The Local Community: A Handbook for Teachers* is a companion booklet for the course of suggested problem-solving activities dealing with local community studies. The course has been widely adopted, largely through the proselytizing efforts of teachers involved in its development and through a series of conferences sponsored by AAG and funded by NSF. Another publication of the High School Geography Project, *Experiences in Inquiry*, is an in-service and pre-service teacher education activities manual prepared in cooperation with Sociological Resources for the Social Studies. It asks teachers to analyze NSGP-derived activities for content, process, and behavioral objectives and to develop teaching strategies based on the activities and their evaluation of them. *From Geographic Discipline to Inquiring Student* is the final report of the project and has been advertised as a "model for curriculum change" in any discipline. The AAG has developed guidelines and standards for the education of teachers, and NCATE uses them in accrediting teacher education institutions. NASDTEC does not as yet; it will probably do this when the National Council for the Social Studies and NASDTEC complete the social science program approval standards.

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[1] The Visiting Geographical Scientist Program is intended to benefit colleges with small or non-existent geography departments. Geographers from major departments spend a day or more at such schools at the school's invitation to consult with faculty, administration, and students on current developments in geography. NSF funds the program. Other AAG education projects which may be of interest include efforts to enlarge, upgrade, and expand geographic education in two-year colleges and development of an issues-based, cross-disciplinary social studies basic course for teacher trainees. Finally, the Task Force on Graduate Education has undertaken to promote innovation in graduate education in geography, more cross- and multi-disciplinary geographic education, more doctoral research on societal problems from the perspective of geography, study of new models of college teacher preparation, and research into graduate student recruitment strategies and placement. Presumably this task force would be responsible for efforts to include a teacher-training element into Ph.D. programs.

The report of the Geography Panel of the Behavioral and Social Science Survey (*Geography*, edited by Edward J. Taaffe) stresses geography in terms of the contributions the discipline can make to the behavioral and social sciences, particularly to the problems of spatial organization and the relationship between man and the environment. It specifically downplays the history of geography as a school subject and stresses its historic role in social problem solving in this country as well as abroad. The current argument for more and better geographic education is centered around the ever-increasing complexity of this country's international relations, the growing environmental and populational problems this country faces within its own boundaries, and the need for an informed citizenry. The approach favored currently is problem-solving or inquiry, but map-making and other such work-study skills still play a major role in geographic education.

Geography appears to have enough stature to keep its hand in the teacher education business but not to have such powerful licensing and accrediting tools as the American Chemical Society and the English organizations (MLA and NCTE) have. Geography has endeavored to compensate for its losing the exclusive hold on the "school aspect" of certain social science concerns by developing a broader range of concerns of its own–both for inquiry and application. This cannot but be a healthy development. A profession and a discipline which is only a "school" study and which does not provide real tools for the assault on the frontiers of inquiry is not likely to be very useful in schools either.

AMERICAN ASSOCIATION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

The American Association of Health, Physical Education, and Recreation was originally founded in 1885 primarily as a society of professionals in the field of physical education. In its current form it is something of an historical accident, since physical education teachers were given responsibility for health education when it became mandatory in secondary schools. According to its constitution, AAHPER proposes "to increase public understanding of the contributions of health, physical education and recreation, and the allied fields, to facilitate cooperation among the fields and improve their effectiveness, to encourage, facilitate and disseminate research, to improve professional standards and performance, and to produce and distribute educational media of concern to members."

The membership of the group is heterogeneous in other ways. Nearly three-fourths of the 50,000 members of AAHPER are professionals in the areas covered by the association's structure. Another 24 per cent are undergraduate students, and 2 per cent are associate members who are interested in the activities of the association but are not professionals engaged in the field. The membership is increasing. Professionals and Associates pay $25 in dues; students pay $10. Most of the revenue of the association (which supported a budget of over $3 million in 1972-73, increased by 11 per cent over 1970-71), comes from the dues; a small amount comes from USOE.

The structure of the organization appears to be open enough. AAHPER is divided into six geographic districts, each of which elects its own officers, as well as a representative to the national board of directors. It is further subdivided into fifty state and four territorial associations. The representative assembly of AAHPER meets annually and is charged with responsibility for approving changes in the bylaws and the constitution, passing resolutions (these must also be approved by the board of directors), and reviewing the actions of the board of directors. Officers are nominated by a committee of six members, each of whom is appointed by a district president. Nominations can also be made on the floor of the representative assembly, but candidates must agree in writing to serve if elected. Officers are elected by the representative assembly at the annual meeting. The executive secretary-treasurer of the association is recommended by the board of directors and approved by the representative assembly; he in turn employs all journal editors.

There is a further organization of the association into divisions governed by subject interest; accordingly, there are divisions of dance, girls' and women's sports (the second largest with 6,000 members), men's athletics, physical education (the largest, 15,000 members), recreation, safety education, school health, and general interest (which includes administration, therapeutics, international relations, outdoor education and camping, measurement, and evaluation). In 1970 a reorganization plan was drawn up which proposed that the association become an alliance of autonomous associations which would provide services and leadership for the needs and interests common to two or more associations. The present status of the proposal is not known, but as of 1973 it had not been implemented.

AAHPER is an extremely active professional association. It produces ten periodical publications[1] as well as about thirty new books a year. It provides numerous services for its members, including placement, group insurance, travel programs, and so forth. And the list of commercial exhibitors at the last annual meeting of the association covers every conceivable interest of its members.[2]

In the area of undergraduate education, AAHPER has produced "Guide to Excellence for Physical Education in Colleges and Universities." It sponsors a joint project with the student action council on "Interpreting Physical Education Programs to College Students." Moreover, it is studying the status of general physical education programs in four-year colleges and universities. At the pre-college level, the association is responsible for "Essentials of a Quality Elementary School Physical Education Program" and "Guidelines for Secondary School Physical Education," as well as for project clinics conducted by master teachers in new ways of teaching large groups, improvising inexpensive equipment, and using available space. In addition to working with the Arts IMPACT Project, which sponsors experimental school programs, it has USOE grants for a sports skills test project, a school nurse manpower project, an outdoor education project, a program for the handicapped, a project on smoking and health, and a program of public information on physical education. "Physical fitness is . . . BEAUTIFUL!" There is no particular evidence that AAHPER is trying to improve physical and health education as it is currently practiced in the schools by developing new teaching strategies; children still complain of the same dull routines and favoritism toward athletically talented classmates that have haunted physical education programs for many years. Some new programs, not previously attempted, are being developed by the association; however, existing programs are only subject to compliance with the various existing guides and standards. And in the last analysis, young people coming out of school now seem no more physically fit than their elders.

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[1] The *Journal of Health, Physical Education and Recreation*; separate journals on school health, research, outdoor education; a newsletter called *Update*; an athletic directors' newsletter; a newsletter called *Challenge*, dealing with health, safety education, camping, etc., for impaired, disabled, or handicapped people.

[2] American Junior Bowling Congress, Grandwood Flooring Co., American Cancer Society, Capezio Shoes, Chevron Asphalt, Dinaturf, Gillette toiletries division, Guidance Associates, Harper & Row, Kimberley Clark, Lion Brothers (which produces blazer emblems), MacArther Towels, Mason City Tent and Awning, and numerous other companies dealing with laundry equipment, book publishing, dance costumes, athletic equipment, the beverage industries, and so forth.

AAHPER is very visible on the national scene. It works closely with the President's Council on Physical Fitness and Sports and cooperates with the council in administering the President's physical fitness awards (which go largely unnoticed by the general public). It played a significant role in stimulating interest in the Environmental Education Act of 1970 and in programs for the mentally retarded, as well as physically handicapped groups. Its professional preparation panel studies, makes recommendations, and prepares materials on major concerns of the profession. AAHPER is a national affiliate of NEA.

With all of this going on, one would think AAHPER must not have any problems, but it does. It has so many programs that it is difficult to get schools to fund them all, and it has become a major preoccupation of the association to head off curtailment of physical education programs in the schools. There is even some interest in supporting year-round school to make time for all the possible physical education activities. And there is a strange kind of "double-think" being practiced in the AAHPER: there has been a significant reduction in the number of available positions in elementary physical education, but at the same time the association points out a need for more people to enter the field.

The future of physical and health education lies in its graduate students, who will become the leaders in the field and in its professional groups. Their attitudes will determine whether or not physical education participates in the reform other disciplines are currently undertaking. How democratically inclined are these students? The Study Commission has compiled a statistical analysis of the Carnegie Commission Study of Higher Education which yields several interesting insights into their attitudes. For example, only slightly more than half of the physical education graduate students surveyed thought that higher education should be available to any high school graduate who wants it; 18 per cent disagree with that idea. A scant 5 per cent agreed that requirements for minority faculty appointments should be relaxed; only home economics students felt this strongly about this proposition (8 per cent). Four-fifths of those polled disagreed with such a method for drawing minority groups into their professions. Only 11.6 per cent of these students would even relax academic standards enough to admit more minority undergraduates to the schools. A breakdown of physical education student responses to further questions and some figures for other student group responses, for purposes of comparison, are reproduced below.

		Physical education students	**Most liberal responses* (other than p.e. stud.)**	**Most conservative responses** (other than p.e. stud.)**
Any special programs for blacks should be controlled and administered by blacks	agree	18.2%	53.2%	24.7%
	disagree	81.9%	46.9%	75.3%

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*The most liberal responses were elicited from students in the fields of social work and welfare and architecture and design.

**The most conservative responses came from the home economics students.

		Physical education students	Most liberal responses (other than p.e. stud.)	Most conservative responses (other than p.e. stud.)
Where de facto segregation exists, blacks should control black schools	agree	37.6%	79.6%	60.1%
	disagree	62.5%	20.4%	40.0%
Most poor people could help themselves if they really wanted to	agree	72.1%	12.5%	60.6%
	disagree	27.8%	87.4%	39.3%
You hear too much about minority rights—not enough about majority rights	agree	55.0%	18.3%	70.2%
	disagree	45.0%	81.8%	29.8%
Student demonstrations have no place on a college campus	agree	52.0%	19.5%	55.8%
	disagree	47.9%	80.5%	44.2%
Students who disrupt the functioning of a college should be expelled or suspended	agree	93.4%	43.9%	77.5%
	disagree	6.6%	56.2%	22.5%
College officials are too lax in dealing with student protests on campus	agree	91.1%	32.9%	79.7%
	disagree	8.9%	67.1%	20.3%
College officials have the right to regulate student behavior off campus	agree	21.8%	6.6%	18.9%
	disagree	78.2%	93.3%	81.1%
Faculty members should be free to present in class any idea they feel is relevant	agree	85.5%	95.8%	70.2%
	disagree	14.4%	5.2%	19.7%
Hippies represent an important criticism of American culture	agree	35.6%	80.1%	37.5%
	disagree	64.3%	19.8%	61.5%
The decline in moral standards among youth is a major problem in America today	agree	52.2%	26.2%	65.7%
	disagree	47.7%	73.8%	34.2%

It is evident that, if the results of the Carnegie Commission Study are an accurate reflection of widespread reality, graduate students in physical education and health have little sympathy for the problems of minorities, are comparatively intolerant of student protests and demonstrations, are relatively authoritarian in their attitudes toward the disciplinary policies of college officials, would tend to restrict academic freedom, and demonstrate comparatively little tolerance and understanding of the divergent value systems of contemporary American youth. This does not portend an encouraging atmosphere for democratic reform of education in the fields of physical education and health.

AMERICAN VOCATIONAL ASSOCIATION

Recently, vocational education has ceased to be a kind of anteroom for the "mainstream" of American education—the academic curriculum in the schools and the institutions of higher education. It has been pushed into the center of the education reform struggle as a consequence of the new interest in Washington in proprietary schools (which primarily offer educational services of a vocational nature), in measurable outcomes for education, and in career education. Indeed, for a time, it appeared that the Office of Education proposed to use "vocational education," relabelled as "career education," as a device to reform all American education, pre-school to graduate school. That apparently was a misunderstanding of the purpose of the career education program. Whatever the final outcome of the controversy over career education may be, it is clear that vocational education has been brought under the wing of the education reform movement.

Vocational education does not easily lend itself to categorization, but in keeping with some recent trends in social studies toward leaving the ivory tower behind and descending to the real world where people live and work, it seemed sufficiently sensible and a matter of convenience to place the American Vocational Association among the social sciences. It is also sensible since career education and other related "education reform" programs propose not only to change education for jobs but also to change some important social structures (cf. James Coleman, *Youth in Transition*; James O'Toole, *Work in America*; and the Career Education Bill).

The AVA is a sprawling "private, non-profit, professional, educational organization devoted exclusively to the promotion and development of vocational, technical and practical arts education and the professionalism of its members." Actually, it is a federation of about eighty state associations with a well-developed divisional structure which is currently under review by a reorganization committee created by the 1971 convention of the association. Less snooty about membership than almost any of its brother or sister organizations, AVA has no entrance requirements beyond interest in its aims and programs. Members are categorized as affiliates (members of state organizations) or direct members, both of whom can vote and hold office in the organization. Full-time graduate or undergraduate students with an interest in vocational, technical, or practical arts education at any level may also become members of AVA; but they do not vote in elections, nor can they hold office in the association–a matter of some concern in any organization that has interest as its only criterion for membership, particularly since the society is a teacher's society. The majority of AVA members (some 60,000) either teach in, or administer programs in, secondary and post-secondary schools aimed at generating skilled workers. About 65 per cent of the members are secondary school teachers, 5 per cent are involved in teacher education, and less than 10 per cent are Ph.D.'s serving in colleges or universities. (Most members have bachelor's or master's degrees; some operate in trade or industrial areas and do not hold degrees.) Most of the financial support for the association comes from membership dues ($3 for students, $12 for affiliates, $20 for direct members), so the organization is not tied to the government's shirttails.

For all its openness as to membership, the AVA is short on direct democracy. The House of Delegates, a representative assembly, transacts the business of the AVA. State associations are represented in this body according to their size. Meetings are open to all members, but voting is restricted to officially designated delegates. There is also a Board of Directors which appoints an Executive Director and the members of the Nominating Committee, as well as approving the appointment of the Treasurer of the association. Elections are not very democratic. The President is elected by mail ballot of all active members. Vice Presidents are elected by plurality vote of the division members present and eligible to vote at a division meeting during the AVA convention. The Nominating Committee submits nominees for all offices, but additional nominees for President may be added to the ballot by nominations made from the floor by members of the House, provided each nominee is approved by a majority of the delegates. The procedure for changing the organization is not quite so cumbersome. Amendments to the Constitution of the association are submitted to the Executive Director at least sixty days prior to the annual convention. The Executive Director passes them on to the House of Delegates, and they are enacted if approved by a majority of the members of the House present and voting. If the presence of direct participation in an organization is relevant to any test of the readiness of a profession to lead in reforming education, the AVA may not be ready. At best, the machinery appears clumsy.

The organization of AVA may reflect its general pragmatic bent; it was put together like most American towns–as opportunity allowed and not according to a plan. In its work in Washington, AVA is also more pragmatically and less academically oriented than most other professional associations considered here, particularly in the area of political activity. In fact, AVA comes about as close to being a lobby as any professional society can be. At the federal level, it provides information to staff and members of congressional committees on any subject touching vocational education, whether or not legislation is pending. It also prepares and delivers testimony, primarily before education committees, but for others as well, on such subjects as manpower legislation and the relationship of education to the production of skilled workers.

The association has been especially active with respect to the concept of career education (which has enhanced its reputation as an agent of education reform). However, there has been a strong feeling among vocational education specialists that many states which have hastened to change the name of their Division of Vocational Education to Division of Career Education have only been involved in a semantic game. In 1971 a task force was formed to support this concept on the condition that by career education the Office of Education meant a total concept of education, not merely occupational training. Subsequently, the Office of Education, the AVA, and the Congress have been struggling to say what they meant by career education as "a total concept of education" rather than simply a retitling of occupational education. The problems in career education have not come in defining its vocational side but in getting clear about its educational and humanistic side. And here the AVA may not be able to help—at least not by itself. Lately, however, some progress in that direction appears to have been made with the publication of *Youth in Transition* and *Work in America* and with the growth of OE reliance on philosophers and thinkers from outside the vocational field in the defining of career education's *raison d' être.*

A more important skill which the AVA has may be its knowledge of what constitutes non-job-specific impediments to the holding of a job, as defined by the Griggs decision. The Study Commission has argued:

(1) That adequate job descriptions do not exist in America's public schools;

(2) That many tests (NTE, etc.), examination-based licensing procedures (Board of Examiners, etc.), and course-based licensing procedures (NASDTEC-approved, for example) include non-job-specific impediments to the holding of a teaching job;

(3) That the criterion of the right to hold a job in any school is "benign effect on children"–not simply overt behavior emitted by the teacher;

(4) That validated job descriptions, licensing procedures, and methods of showing "benign effect on children" will be required in the near future.

Parts of this argument have been put before by the Equal Employment Opportunity Commission's Associate General Counsel, William Robinson; by the successful lawyers for the plaintiffs in the *Walston vs. Nansemond County* case; and by the equally successful lawyers for the plaintiff in the *Mercado and Chance vs. New York Board of Examiners* case.

In response to these priorities, the AVA has written to the Study Commission as follows:

> The AVA has also been interested in investigating the legal bases and quasi-legal restrictions that preclude the majority of young people from having access to a type of education that is practical and meaningful to them. Were it not for the failure of education to adequately prepare these young men and women, we would not need the costly and duplicated efforts of remediation and manpower training that exist today. In this regard we share many of your concerns that perpetuate the status quo.
>
> While we recognize credentialling and licensing of various types to be factors that impinge upon vocational-technical education, we do not feel these to be major impediments to our mission. However, the "cultural neutrality" theory is interesting and could very definitely become a major concern of vocational educators. . . .[1]

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[1] This refers to the following Study Commission argument: "As we all know, this is not universally nor even typically the case. The author is aware of no instances in which a school system has prepared adequate job descriptions. At best present teacher licensing procedures can claim something approaching content validity, the sort of validity resulting from *subjective* comparison between prior education and experience (and

As you may know we conducted a feasibility study of five states' legislation for the Ohio Division of Vocational Education to determine if a study of state legislation could be meaningful to improved delivery systems and the development of model state legislation.[2] The conclusions drawn from the study were: that

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in some instances test results) and a specific job, the nature of which, as I have indicated, is either generally unknown or largely undescribed.

"It is in this context that Title VII of the Civil Rights Act of 1964 and its subsequent amendment becomes important and provides one of the bases for challenging the 'melting pot' ideology that has motivated our general educational policies, including teacher credentialling. Title VII originally offered protection to several groups from various forms of discriminatory employment practices in private enterprise, and, then, by amendment, provided the same protections from discriminatory practices of state and local governmental agencies, including schools and colleges. As a result of litigation to seek enforcement of Title VII, the Supreme Court in Griggs *vs.* Duke Power Company held that procedures in assessing prospective employees or present employees for promotion must be *neutral* with respect to factors such as test scores and educational background, *except* when the results of tests or educational background have a manifest relationship to performance on the job. (Griggs *vs.* Duke Power Company, 401 U.S. 421, 19.71)" ("Some Legal Developments and Their Possible Impact on the Future of Education," Lawrence D. Freeman, p. 3.)

"The line of argument I have incompletely developed supports an assertion of an individual's right to his culture. If a court can write that the 'law should be construed in reference to the habits of business prevalent in the country at the time it was enacted' and 'that the law was not made to create or shape the habits of business but to regulate them, as then known to exist' (Patterson, *The Forgotten Amendment*, p. 56) certainly, with respect to language and culture, education laws must be so construed as to protect the linguistic and cultural habits of individuals and groups."

"Thus, in the absence of a compelling state interest, the character of which I cannot imagine, the state must be *neutral* with respect to language and culture. Any other position requires development of arguments demonstrating the state's interest in depriving an individual (or a collection of individuals) of his most private habits, customs, and mores, an interest that could hardly be said to secure 'benign effect.' The concept of neutrality is not foreign to our traditions or judicial opinions." (*Ibid.*, p. 10.)

[2] Cf. "Some Legal Developments and Their Possible Impact on the Future of Education" and "Training Document on Legal Issues: Part I" by Lawrence D. Freeman, Study Commission on Undergraduate Education and the Education of Teachers, Lincoln, Nebraska, for suggestions regarding model legislation.

> the legal bases for educational programs are paramount to effective delivery systems, and vital to the continuity of program growth and development; that in the absence of law, policies and regulations chart the course of changing program emphasis and support, that a model could service as a guide or matrix in developing comprehensive legislation to better serve the needs of all students and adults, and more.
>
> As important or vital as we are convinced this pursuit to be, we have not gained financing for further study or modeling. The National Institute for Education last year evaluated our prospectus not as a legal study but as a curriculum project. We have submitted a different prospectus this year but hold little hope for funding of a practical project from NIE, because of prevailing attitudes there.

It may be that such positions will allow AVA to contribute more to education reform than all of its efforts to "lobby" for vocational and career education funds.

The impact of AVA activity on accreditation promises to be substantial in the future. Leaders of the association feel there is a need for the development of standards for accrediting vocational programs which is not being met, and AVA is moving to fill the void. In May, 1971, AVA in cooperation with the Office of Education and a group of agricultural experts, worked to develop guidelines for agricultural education. The same type of effort is forthcoming in the areas of trade and industrial education and distributive education. The association also tries to involve itself in curriculum development by influencing the thinking of individual members. Three other government-funded projects round out AVA's current program: an OE project to develop guidelines for industrial arts education, another OE project that involves a search of state laws to determine their effect on vocational educational policy, and a Department of Labor project called Manpower Research Visibility.

It is clear that AVA is a heavily professional organization with a strong interest in influencing the educational policies which produce skilled workers. It is equally evident that it will become increasingly active in pressing for the development of guidelines for accreditation in all areas of vocational education. And its involvement with the Office of Education in researching state laws in this area implies an intention to see to it that the guidelines produced are influential beyond the association's doors. It is not at all certain, however, that the AVA has a clear idea of how it would reform work and education to make them more humane, or that the AVA can exert leadership in making career education a "humanistic" program as well as a design to resurrect the work ethic, or that AVA has given as much attention as it might to cognitive –as opposed to work-skills–gains which can be gotten from field work and experience in the work space.

SOCIAL STUDIES CURRICULUM DEVELOPMENT: SECOND THOUGHTS

The May, 1971, issue of Social Science Education Consortium *Newsletter* contained an article entitled, "A Revolution Comes of Age: Social Studies Curriculum Development in the Seventies," by Michael A. Radz and C. Frederick Risinger. The authors presented a brief historical review of the beginnings in the sixties of educational reform, generally and in the social studies, as well as a statement of the apparent trends this reform is taking now and for the future. In the course of their investigation of the state of social science educational reform and to support their conclusions, they interviewed sixteen leaders in social science education who have been involved in recent major curriculum development efforts. Some of those conclusions and the statements which support them are excerpted below:

Donald Oliver and John Gibson [Director, Lincoln Filene Center's elementary-level Intergroup Relations Curriculum] stressed the necessity for materials that students can easily see are related to their own experiences, interests, and needs, but noted that the majority of materials coming from the project centers have emphasized the structures, concepts, generalizations, and modes of inquiry of specific disciplines [e.g., *Inquiries in Sociology*]. According to John Haas [Center for Education in the Social Sciences, University of Colorado], teachers are reporting that their students simply are not relating to materials of this type. Instead, they are concerned about the nature and problems of the society in which they live. John Jarolimek [President, National Council for the Social Studies] and Nicholas Helburn [ERIC/ChESS; formerly Director, High School Geography Project] see the social studies classroom of the 70's extending into the community, as students not only demand and receive a more realistic view of society, but also seek to translate their concern into social action.

Many young people have lost faith in the change mechanisms provided by the American system. The problem, as Mark Krug [Schwartz Citizenship Project, University of Chicago] sees it, is that traditional civics and other social studies offerings have told students what the system is and how it is supposed to function. The more sophisticated, informed student of today, however, perceives that the ideal is not the reality, and concludes that other alternatives for change must be employed. Krug argues for programs which lead students to an awareness of how the system actually operates, imperfect though it may be [e.g., Political Science Education Project].

C. Benjamin Cox [School of Education, University of Illinois] sees the concern of the young about social problems as one of the major determinants of the social studies curriculum in the coming decade. Because today's students will not buy the disciplinary approach, Cox predicts the demise of discipline-related projects. . . .

Howard Mehlinger [High School Curriculum Center in Government, Indiana University] notes that many of the new materials were designed for traditional rather than innovative classrooms and schools.

[1. "Inquiry approaches will continue strong"]

The "thread" of the 60's most frequently mentioned as a continuing, significant attribute of social science curriculum development is the "inquiry" mode of guiding student learning [*Inquiries in Sociology*]. Although definitions of the inquiry method have not been completely agreed upon, nearly all of the social science educators contacted agree that it will continue to be the dominant strategy for student activities. Development of materials that require the student to examine and analyze data, generate hypotheses, and evaluate generalizations must be hand-in-hand with the development, by curriculum projects and publishers, of materials encouraging flexibility of implementation and individualization of instruction.

The question in the minds of many of those interviewed, including Cox and Barry Beyer [Carnegie-Mellon Social Studies Curriculum Center], is whether teachers have the knowledge and skills to utilize the inquiry approach effectively. Beyer goes so far as to suggest that, with a few exceptions such as minority studies, "the bulk of the innovative development work is already done. We have more materials than we need." He maintains that the crucial problem now is the ability of teachers to translate the intended inquiry strategies of the curriculum developers into successful classroom tactics.

Although it is clear that there is a significant movement away from emphasis on the structured concepts and generalizations that marked the early "new social studies" movement, many of the respondents feel that the structure of the discipline will still provide the foundation on which further innovation will be built. While few agree with Marion Rice's [Anthropology Curriculum Project, University of Georgia] contention that "the pendulum will swing toward more structured programs which emphasize the acquisition of basic skills and knowledge," several educators, including Jarolimek and Paul Brandwein [Center for the Study of Instruction], feel that concepts will continue to provide a core of curriculum development. However, both Jarolimek and Brandwein forecast that the consideration of values and the process of valuing will be the key ingredient of the "newer" social studies, while the structure of the social sciences will serve primarily as a rational base for the exploration of values and social valuing processes.

Other trends of the 60's—which are likely to continue into the 70's, possibly with increasing emphasis—are multimedia approaches and paperback, single-unit materials packages [e.g., Anthropology Curriculum Study Project]. These changes in the format of materials have resulted from the developers' commitment to providing more varied, relevant, and exciting learning activities, as well as from the classroom teacher's desire to have materials which allow flexibility and individualization.

> 2. *There is a pronounced movement away from materials based on single disciplines—their structures and their cognitive content—toward multi- and cross-disciplinary studies, with emphasis on modes and processes of inquiry, values, and value conflicts.* [Italics in original.]

. . . . Both Helburn and Haas contend that future funding by the National Science Foundation, the United States Office of Education, and other organizations will radically deemphasize curriculum development based on purely cognitive learning or on single disciplines, such as geography and economics. Harold Berlak [Metropolitan St. Louis Elementary Social Studies Project, Washington University] sees the move away from this kind of curriculum development in the 1960's. The early curriculum projects were, in his words, "based on the assumption that the schools were intellectually barren and that the source of true knowledge rested with the social scientists." But, as Berlak points out, many of those who were in the vanguard of the early "new social studies" revolution "never asked . . . knowledge for what?" As a result, many of the curricula developed during this period were intellectually sound but still failed to get at the heart of education, because they neglected the nature of education, because they neglected the nature of the learner and the learning environment.

This last point brings us to one of the predictions most frequently encountered in our research. Nearly every social scientist and social studies educator contacted feels strongly that curriculum materials developed in the next decade will put a strong emphasis on the individual and his interaction with society through interpersonal relationships, and with value-oriented societal issues such as war, feelings of alienation, and environmental decay. Many of those interviewed base their forecasts on American society's apparent realization that human relations and values are at least as significant as cognitive forms of learning, if not more so.

The emphasis on value clarification and the development of personal values related to broad societal issues was emphasized particularly by those people who are concerned with "humanizing" the total school environment and promoting the study of individual value analysis and decision-making. James Shaver [School of Education, Utah State University], Oliver, Berlak, and Gibson have been developing curriculum materials concerned with value conflict and analysis since the early 1960's. . . .

Accompanying the development of materials based on a humanistic approach to values and the process of valuing is a trend toward developing multi- and cross-disciplinary materials combining all the social sciences on the one hand of the social sciences, and the humanities on the other. Indeed, many of our respondents suggested that the time of the individual discipline-based social studies curriculum may be drawing to an end. Cox predicts that the discipline-related project materials "will be forgotten in five years," and [Nicholas] Helburn . . . says that a funding proposal for another single-discipline effort like the High School Geography Project would probably be turned down by the National Science Foundation and the U.S. Office of Education.

The reaction away from single-discipline materials is engendered both by a demand on the part of the schools and a realization on the part of curriculum developers that an integrated, humanistic approach to social studies education is more realistic and more effective than a fragmented program based on single-discipline courses.

> *3. Teacher training is becoming a more integral facet of curriculum development and will, in the future, be important from a project's inception.* [Italics in original.]

Our second hypothesis was supported by every individual that we interviewed. While there was consensus on the hypothesis as stated, there were varied reactions to the question of why this trend would characterize future curriculum efforts, what the focus of teacher training should be, and who would assume the responsibility for training. Several project directors—notably Gibson . . . and Suzanne Wiggins Helburn [Co-Director, ECON 12, San Jose State College]—indicated that their projects had always viewed the teacher as the key to the successful use of the materials, and hence, they had built in teacher training from the beginning. However, as Haas observed, many of the projects "learned belatedly that pre-service and in-service should have been considered at the outset rather than at the dissemination stage."

It appears that the most reasonable explanation of the renewed concern for teacher training is simply that the experience of the 60's showed that even carefully selected classroom teachers had difficulty with the new materials and the methods used in these materials. As Krug observes, "The emerging emphasis on teacher training is a simple result of the realization that just publishing the most attractive packets of curricula, the most ingenious, the most inventive and imaginative materials, is heading nowhere unless we train teachers to use them." Malcolm Collier [Director, Anthropology Curriculum Study Project] supports this view. She notes that the Anthropology Curriculum Study Project (ACSP) operated under the assumption that as teachers actually taught the materials, they would, in effect, be training themselves. However, Collier concedes that experience has proven that the ACSP staff was overly optimistic on this point.

The problem, as Beyer sees it, is that teachers have not been trained to use inquiry techniques as developers had intended. The result has been the use of conventional methods with innovative materials and the resultant impact has been limited, if not negative. . . .

No one disputes the necessity of teacher training and, as Krug emphasizes, retraining. The unresolved issue appears to be who shall assume the responsibility for this function. Berlak asserts that teacher training must be a local matter, for "national projects, no matter how well conceived, cannot direct teacher training throughout the country." . . . However, Mehlinger observed that school districts are poor and getting poorer. It follows that in-service training is not likely to become a priority budget item, as desirable and necessary as this may be. The harsh reality is that the various instructional areas within a school system are in competition for funds. . . .

Jarolimek sees the responsibility for teacher education being borne by a consortium composed of teacher trainers in the universities, local districts, and professional associations. Such an approach would provide the desired continuum of professional growth. Cox, however, envisions a diminished role for the university. He sees the local school district assuming the burden for teacher training in conjunction with state departments of education. In this arrangement, teacher training will take place in the field, with local districts cooperating with the state in the administration of certification procedures.

Publishing companies have been active in sponsoring workshop programs. Most respondents, however, expressed skepticism about the willingness of publishers to invest substantial sums of money in teacher training. Undoubtedly, efforts of this type will continue on a limited basis, since publishers recognize the sales value of workshops. It could well be that publishers will follow the example of the High School Geography Project and its publisher, the Macmillan Company, in developing teacher education kits instead of, or in addition to, sponsoring teacher training workshops and institutes.

Mehlinger described an approach at Indiana University in which preservice teachers are trained in curriculum development as well as in methods, thus requiring college methods teachers and curriculum developers to work more closely than they have in the past.

> *4. Publishers have felt the impact of the major projects and are reacting by paying more heed to such aspects of curriculum development as rationale, objectives, teaching strategies, field testing, and teacher training. [Italics in original.] [This point is self-explanatory.]*

HUMANITIES: INTRODUCTION

> The humanities are the study of that which is most human. Throughout man's conscious past they have played an essential role in forming, preserving, and transforming the social, moral, and aesthetic values of every man in every age. One cannot speak of history or culture apart from the humanities. They not only record our lives; our lives are the very substance they are made of. Their subject is every man. We propose, therefore, a program for all our people, a program to meet a need no less serious than that for national defense. We speak, in truth, for what is being defended—our beliefs, our ideals, our highest achievements. (*Commission on the Humanities,* p. 1)

> To define intellectual activity as superior, as that toward which all activity should strive, and to characterize its highest functions by disinterest—this surely is to formulate a self-serving ideology for people like ourselves. It should hardly come as a surprise that the intelligentsia will generalize its own interests into the interests of humanity: what's good for us is good for everybody, and therefore above class interest or social conflict. Thus the enclave inside which we live pretty well and even enjoy ourselves is really for the benefit of humanity—except most of it has to be kept out. (Louis Kampf, presidential address, MLA Convention, December, 1971, p. 379)

The Commission on the Humanities was an independent, nationally-organized commission, sponsored jointly by the American Council of Learned Societies, Phi Beta Kappa, and the Council of Graduate Schools in the United States, which had as its objective a national governmental funding agency for the humanities, similar in structure and function to the National Science Foundation. This commission produced in 1964 a report of its deliberations about the state of the humanities in this country, the chief conclusions of which were these:

> (1) that expansion and improvement of activities in the humanities are in the national interest and consequently deserve financial support by the federal government; and (2) that federal funds for

> this purpose should be administered by a new independent agency to be known as the National Humanities Foundation. (*Commission on the Humanities*, p. v)

The report holds up the specter of being "second-best in [the] world" if the country falls behind in its support of the humanities, the same argument which seemed so impressive when it was applied to the sciences in the remembered past.

Ironically, at that time USOE was making certain gestures in the direction of support of the humanities, but this support was commonly tied, or related, to reform in the common schools. The humanities professional societies felt that they needed a purer vehicle. Although NEH was eventually to leave school and teacher education reform pretty much behind, in 1964 the Commission on the Humanities felt that it needed to speak to the issue of the schools:

> The areas of the school curriculum embraced by the following subjects are those we refer to as the humanities: English language and literature, philosophy, modern and classical foreign languages (in their literary and historical aspects as opposed to the narrower concept of communication skills alone), history and the social sciences, the visual arts, music, the performing arts as they are represented in the schools, and those aspects of science and mathematics which widen the understanding of man in relation to his environment as well as to other men.
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> Certain generalizations can be applied to all of these fields of knowledge and endeavor. One is that they do not, in themselves, usually offer a direct route to a vocation or profession. Although skill and interest in them may enhance vocational opportunities, they are fields of study which hold values for all human beings regardless of their abilities, interests, or means of livelihood. These studies hold such values for all men precisely because they are focused upon universal qualities rather than upon specific and measurable ends. (*Commission on the Humanities*, p. 19)

These paragraphs are remarkable for what they omit as well as for what they include, for the implications of the ideas they express and how these ideas correspond with reality. For example, the list of school subjects which are said to constitute the humanities includes certain aspects of science and mathematics which are roughly translatable as philosophy and history of science and so fall under philosophy and history. Moreover, it would seem perfectly proper to include theology or religion, as distinct from philosophy, in a list of studies which "are focused upon universal qualities"; the doctrine of separation of church and state does not preclude support of such studies even by a quasi-governmental agency. One wonders why the performing arts may not be supported outside their representation in the schools since even there they are available to students for the enrichment of their education. One wonders how the emphasis on languages only in their literary and historical aspects, rather than for their communication value, correlates with the current insistence that language programs teach students actually to use a language rather than merely to translate what is written in it. Finally, if the humanities are indeed "fields of study which hold values for all human beings regardless of their abilities, interests, or means of livelihood," where is the place in the schools for those who simply want to become educated people, without reference to any career; and where is the place in humanities study for people who want to understand, for example, the history and songs of the labor movement as part of using the humanities for policy purposes?

But we digress. The commission accomplished its purpose, and the National Endowment for the Humanities was born. What NEH has actually contributed to "the national ethic and morality, the national aesthetic and beauty or the lack of it, the national use of our environment and our material accomplishments" is not the immediate concern of this discussion. What is of interest to us is that the professional societies in the disciplines concerned contributed substantially to the published report of the commission. One of the most detailed reports came from the Modern Language Association, which enumerated a large number of needs for financial support, including standard editions of American authors, bibliographies, microfilm and computer library facilities, centers for intensive study, mechanical aids to foreign language instruction, and study of the new computer technology to ascertain its usefulness in scholarship and teaching. (The statement addresses itself chiefly to the problems of post-secondary education; and although it admits that "A majority of college students do not speak, write, or read their own language well," it offers no plan, financially supportable or otherwise, to remedy this 'most deplorable' situation of all, justifying the omission on grounds that this is, after all, not the responsibility of post-secondary education.) NEH does now support the Center for Editions of American Authors, although this center has come under severe criticism from some fairly influential voices in scholarly circles and from Edmund Wilson, probably America's most distinguished literary critic. MLA, which lobbied for establishment of NEH in the first place, is now in the position of defending this center and thereby protecting the source of its income. NEH's largest award in 1967 was for "a computer-stored bibliography in American studies." Richard Ohmann sheds some light on how such a study fits in with the betterment of mankind and the national interest:

> Why should scholarship and its institutional enshrinement prove so spellbinding? I'm not sure, but I imagine that the answer is much like the general Marxist principle that each class creates an ideology to serve its interests, and to equate these interests with those of society as a whole. (Richard Ohmann, "An Informal and Perhaps Unreliable Account of the Modern Language Association of America," *The Antioch Review*, Fall, 1969, p. 336.)

The second quotation which began this paper is from Louis Kampf, who was a central figure in the upheaval in the Modern Language Association in 1968 and who continues to be a humanistic critic of education in particular and society in general. What can Louis Kampf have done to inspire such fear as is evident in the following letter? "I consider your 'election' as 2nd vice president as valid as that of Fidel Castro and Josef Stalin. . . . I hereby withdraw from the MLA until such time as its management is returned to the hands of Modern Language personnel." (Ohmann, p. 336) What he did that excited such wrath was to introduce the concept of political action into the little world of the humanities–or so many people seemed to think. Of course, learned societies in the humanities had been engaged in all sorts of political action for a long time. All of the most important professional societies in the humanities had lobbied on behalf of the National Endowment for the Humanities; and those concerned with languages (NCTE, MLA) worked hard in Washington to insure the inclusion of English in the extension of the National Defense Education Act (NDEA):

> The flatout effort by the council's leaders to persuade the Congress to include English and the humanities in the extension

> and revision of the NDEA failed, but not entirely. By this vigorous campaign, the executive committee and the committee on national interest informed and *awakened the profession to its political responsibilities* and to its professional responsibilities in facing up to the facts of the status of the teaching of English and of the urgency of improving both pre-service and in-service education of persons assigned to teach English classes. And it eventually led to success in 1964, when English was included in the extension of the act passed by the Congress. (Alfred H. Grommon, "A History of the Preparation of Teachers of English," in *English Teacher Preparation Study*, originally published in *English Journal*, April, 1968, p. 508)

MLA also "helped steer large moneys from the United States Office of Education into the improvement (that is, increased professionalism) of high school English teaching." (Ohmann, p. 343) Clearly, all of these activities are aimed at bringing money into the teaching profession in the area of the humanities. But Kampf was interested in another kind of political action–action which addressed itself to what is most urgently important in our society, to what most deeply affects the people of that society, and not necessarily to the concerns of an intellectual elite.

> When we insist that literary (or any other) study inside the enclave is separate from political action, we seem to confirm that our professional activities are unrelated to anyone but ourselves and our colleagues. The knowledge produced by scholarship is then related only to other knowledge of a similar sort. Such thoughts undercut the humanistic justification for what we do. (Louis Kampf, presidential address, p. 379)

Kampf apparently believed that the humanities could endow a person "with the ability to criticize intelligently and therefore to improve his own society." (*Commission on the Humanities*, p. 19)

> What role, we must ask, does higher education play in America's social and economic system? To my knowledge, no such analysis exists. Without it we are reduced to making unsystematic criticisms of curricula and educational techniques. The move beyond such trivia requires a determination of how devel-

> opments in the academy relate to developments in society, what relevance educational ideology has to social fact. (Louis Kampf, in *The Dissenting Academy*, 1967, p. 56)

What Kampf proposed is contained in his presidential address before the MLA convention in 1971: from the MLA, more responsiveness to human needs, more support for scholars who are victims of political repression, and, in fact, an intellectual revolution; from university departments, curriculum changes derived from central human and social concerns rather than based on a different way of slicing the course-structure pie; from the schools, responsiveness to their students and the community; from the society, reordered priorities.

> And so to reality. We teach language and literature, whatever our intentions, not in some abstract realm, not in and for themselves, but within institutions. These institutions–grammar schools, colleges, high schools, community colleges, and on to the highest academies–serve a major function within the political economy. (Kampf, presidential address, p. 379)

Paul Olson expressed concern about the schools in another, though certainly congenial, way in a speech given at the 1969 USOE-CONPASS-supported (Grove Park) conference of the professional societies designed to encourage them to consider the problems of the schools:

> The schools are the chief vehicle through which a civilization communicates the self-conscious part of its system of values; they are the chief vehicle through which we communicate our sense of what a civilization ought to be. If we are concerned for the quality of civilized life, we are concerned for the quality of the schools which we create. (Olson, *Five Levels of Incompetence*, 1969, p. 123)
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> The central problem of education is not the problem of how we can create better systems which will manipulate people into postures where they will concede to our systems. The central problem is to understand the accent of their cultures and to get to their cultures such educational expertise as will permit them a degree of self-realization. (*Ibid.*, pp. 131-32)

The most significant way in which the professional societies have approached the problems of the schools, insofar as they relate to teaching in those schools, is by drafting guidelines for the education of teachers, who are, after all, finally responsible for what children learn and what the schools accomplish in human terms. In 1968, *English Teacher Preparation Study* was published in *English Journal*. This report was a joint effort of NCTE, MLA, and NASDTEC (funded by USOE) and followed upon similar efforts in science, mathematics, and modern foreign languages. The promise made on behalf of this approach is that "any English department or any school system that will try honestly to plan a program in accord with these guidelines will 'professionalize' its teachers and thereby improve its English teaching to a striking degree." (John Hurt Fisher, *English Teacher Preparation Study*, p. 550) In the ETPS document is a lengthy "History of the Preparation of Teachers of English" written by Alfred H. Grommon, president of NCTE, Professor of Education and English at Stanford University. This impressive and scholarly history is written with the obvious intent of showing how the current guidelines grow out of and fulfill all the best past effort that has gone into the creation of the discipline of English and its corresponding professional community–it is a politically sophisticated document. The guidelines are shown to reflect the spirit of cooperation between the college and the lower school, the need for post-graduate study, the concern for local differences in schools and personal qualities of teachers, the grounding in the development and use of language, and other ideas of earlier groups dedicated to the institution and improvement of the teaching of English. What is interesting about the document is its heavy concentration on individual efforts to serve this end, such as that of Walter Barnes, an early 20th century teacher and critic of education who speaks to the issue of what had even then gone awry with the profession he served:

> Our favorite blunder is presenting this literature as fine art, to be studied and analyzed as specimens of art, instead of as documents of life, romantic or realistic, to be observed and reflected upon as fragments of existence. . . . Are we taking up a drama of Shakespeare's? Instead of reading rapidly through the play, following the story, and comparing it with life as the children have observed life, getting acquainted with the characters and watching them act and react upon circumstances and upon one another, noting passages of wisdom and eloquence with which the pages of Shakespeare are so generously strewn; instead

> of treating the play as a cross-section of human existence, we must study the sources of the plot and conjecture why the author modified them, we must learn the architecture of the play, the exposition, rising action, and so forth. . .–all matters of interest to the technician, to the student of the art of stagecraft, to the dwellers of the Palace [of Pedagogy on the Hill], but of no concern to the inhabitants of the plains. (Grommon, ETPS, p. 495)

Grommon slowly works his way to the present, finally [illegible] up the background of the guidelines. In the mid 1950's a series of conferences (the TEPS conferences), dealing with selection, preparation, and certification of public school teachers, were held by representatives of various academic fields in the sciences, social sciences, and the humanities, as well as of NASDTEC.

> During the decade, 1955-1965, a good deal of educational ecumenicism developed among members of college departments of English and other disciplines, state departments of education and their certifying officers, learned and professional societies, departments and schools of education, the U.S. Office of Education, and in some cases–as in English–among the key organizations within the field. (Grommon, ETPS, p. 506)

Out of this communication and mutual interest finally emerged the TEPS guidelines:

> The TEPS guidelines . . . are endorsed by MLA, NCTE and by the representatives of both organizations who may be in the most strategic position of all to put the guidelines to work in English courses, the departmental chairmen who are members of the Association of Departments of English. And now a new group of participants has been introduced: the National Association of State Directors of Teacher Education and Certification. It could be that English departments preparing teachers may have some difficulties in overlooking the guidelines from now on. (Grommon, ETPS, p. 501)

Some remarks from the introductory document to the guidelines, which are meant to influence teaching at all levels (K-12 and, obviously, beyond) may illuminate the intent behind them and the manner in which they are expected to operate.

> The guidelines are intended to suggest desirable competencies for teachers of English. They should help State Departments of Education evaluate (a) programs for the preparation of teachers offered by institutions seeking accreditation and (b) individual applicants for certification. The guidelines should also help colleges and universities develop and evaluate programs which prepare teachers for elementary schools and teachers of English for secondary schools and should encourage institutions to select and recruit good teachers for the teaching profession. (ETPS, p. 529)

It is the expressed intention of the drafters of the guidelines that they not be applied arbitrarily, that they result in curriculum change in teacher education institutions, that they define chiefly competencies and personal qualities of teachers rather than course requirements, and that they demand not only knowledge of the subject but also knowledge of educational methods and a liberal arts background.

> The beginning teacher of English at any level has a special responsibility to be well qualified *because he is a member of his profession* [italics mine] from the moment he begins to teach. He must have special training in English and he must have a real understanding and awareness of students, their needs and interests, and the world in which they live. (ETPS, p. 530)

In other words, the English teacher's first allegiance is not to his students but to his profession; moreover, he must cultivate an understanding of the world in which his students live, which is apparently not the same one he inhabits. The guidelines themselves can be summarized as follows: The teacher of English for any educational level should have

1. a suitable personality and a liberal arts education
2. continuing study
    a. for elementary school: a 5th year of study, a balanced program of language, literature, and composition above the freshman level, methods, student teaching, teaching of reading

    b. for secondary school: an English major, methods, student teaching, a 5th year of study (graduate level)
3. understanding and appreciation of a wide range of literature
4. skill in listening, speaking, reading, writing; understanding of nature of language and rhetoric
5. child psychology, especially related to the learning process
6. methods and student teaching

Of course, there is much amplification of all this in the guidelines document. Nevertheless, there seems to be nothing too startling in these requirements. They read remarkably like the listing of required courses for an English teacher training program found in any old or new college bulletin: linguistics, composition, literature surveys; speech, psychology and other liberal arts courses (social and natural sciences, arts, language, philosophy, and mathematics); education courses, including methods and student teaching. What, then, are they really intended to do? Perhaps the spokesmen of the sponsoring organizations can shed some light on this question:

> Elementary and high school teaching has, up to now, been a quasi profession. Although many people stay with it as a career, many others pass through teaching on the way to marriage, to administration, or to some other career. On the one hand, those of us who deal on the public level with congressmen and taxpayers are striving to see that teaching becomes sufficiently secure and rewarding to hold many more good teachers–and the teachers' unions may achieve these ends much more effectively than our professional groups have been able to do. But the problem is only one-half with the public who support teachers. The other half is with us teachers ourselves. Unless we are willing to set and maintain high standards for our profession–as **doctors and lawyers** have been willing to do–we cannot demand the pay and the working conditions of professional workers. (John Hurt Fisher, ETPS, p. 477)
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> Clearly the guidelines, if taken with the seriousness they deserve, will have an important bearing upon the course offerings in departments of education as well as English. If the educational philosophy and point of view which they illustrate do have an effect on the colleges, they may be expected, with some reason,

> to influence certification codes and hiring practices. And beyond this, there is the question of their implications for the entire profession. (Albert M. Marckwardt, ETPS, p. 480)

Of particular interest for purposes of comparison of the approaches of various professional societies in the humanities to the matter of minority culture and language and the particular dilemma these present for teachers of English literature and language in the schools are these relatively restrained remarks under Guideline I (Cf. "A Student's Right to His Own Language," NCTE):

> [The teacher of English should have] a genuine appreciation of the variety of linguistic and cultural backgrounds of his students. . . . The increasing appearance of African, Asian, and Latin American literature in the curriculum makes courses in the cultural history of non-English speaking peoples useful for all, and essential for some, teachers. Preparation in speech should help the prospective teacher listen more critically, speak and read aloud more effectively, and assist students in developing these proficiencies. Such preparation should also broaden the teacher's knowledge of the processes of oral communication, help him relate these professes at both theoretical and functional levels to other uses of the English language, and provide him with the means of assessing the effectiveness of his own use of spoken language in varying teaching situations. (ETPS, pp. 531-32)

It is not clear how many full-time equivalents (FTE's) were gained for English by this joint standards effort. Many must have been gained even as many research dollars were gained by the Commission on the Humanities' success in creative influencing of the Congress. Nor is it clear how much has been gained for English by the various lobbying devices described in the essay by Richard Ohmann which follows (practically all of the legitimizing documents cited by Ohmann as used by English departments are professional society documents). It is clear that:

1. Professional societies in the humanities have learned how to make representations which gain and secure money for scholars in the humanities;
2. The process is not an apolitical process, nor is it disconnected

from matters of financial interest;

3. The support process is not "culturally neutral" as the courts would define it, in that most of the humanities garner quasi-judicial support, whether through teacher-licensing guidelines, major requirements for B.A.'s, or NEH funding. Some cultures are much more likely to be required as subjects of study, investigated, and taught than others–particularly those of Northern and Western Europe.
4. The study urged is a distancing study–"focused on universal qualities rather than specific and measureable ends"; it does not "offer a direct route to a profession or vocation."

No one reading either the statement of the Commission on the Humanities, the NASDTEC statement, or the documents cited in Ohmann would ever recognize in them the kind of humanities that gave Abel, in N. Scott Momaday's *House Made of Dawn*, his sense of the form of his region, the ordering principle of his social group, or the meaning and direction of his life. The humanities, as they are practiced at Jemez Pueblo, are quintessential to living; to lose contact with them is to cease to be human. These humanities could perhaps keep us from being "second-best in the world."

> He got down on his knees and put his ear to the ground. Men were running toward him [the Jemez Squash Clan dancers]. He left the road and hid away in the brush, and soon he could see them in the distance, the old men running after evil, their white leggings holding in motion like smoke above the ground. They passed in the night, full of tranquility, certitude. There was no sound of breathing or sign of effort about them. They ran as water runs.
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> There was a burning at his eyes.
>
> The runners after evil ran as water runs, deep in the channel, in the way of least resistance, no resistance. His skin crawled with excitement; he was overcome with longing and loneliness, for suddenly he saw the crucial sense in their going, of old men in white leggings running after evil in the night. They were whole and indespensable in what they did; everything in creation referred to them. Because of them, perspective, proportion, design

in the universe. Meaning because of them. They ran with great dignity and calm, not in the hope of anything, but hopelessly; neither in fear nor hatred nor despair of evil, but simply in recognition and with respect. Evil was. Evil was abroad in the night; they must venture out to the confrontation; they must reckon dues and divide the world.

Now, here, the world was open at his back. He had lost his place. He had been long ago at the center, had known where he was, had lost his way, had wandered to the end of the earth. . . . [N. Scott Momaday, *House Made of Dawn* (New York: The New American Library, Inc., 1969), p. 96.]

NATIONAL COUNCIL OF TEACHERS OF ENGLISH

The National Council of Teachers of English (NCTE) is not dedicated solely to preserving "things as they are." It seems to be concerned with something more than the professional welfare of its members. It appears to be seriously determined to realize its avowed purpose: "to improve the quality of instruction in English at all educational levels; to encourage research, experimentation, and investigation in the teaching of English . . . and to integrate the efforts of all those who are concerned with the improvement of instruction in English." NCTE is not committed to instant revolution in English language arts education. The council leadership approaches issues from the standpoint of what it considers possible to achieve. For example, when asked what he would do to improve English education right now, Robert Hogan, Executive Secretary of NCTE, said he would sieze control of the standardized testing services (SAT, ACT, etc.) and tinker with them in ways which would force a reassessment of their meaning and value. "Why not just tear them up?" "If I did that, the next day representatives from several major universities would meet to consider designing some standardized tests to be used for placement and so forth." Some educational theoreticians would consider this "copping out"; but if it is, it's a rather creative form of that common educational sport.

What "kind" of professional society is NCTE? It is as democratic as they come, although not too long ago it was owned, controlled, and run by one man who made virtually all NCTE decisions. The council, as it refers to itself, is a confederation of teachers, administrators, and related professionals (and non-professionals) associated with elementary, secondary, and college level English instruction, as well as local, regional, and state affiliate organizations. The membership (which is composed of individual voting members and nonvoting institutions, students, and emeritus members) is organized into the elementary (the smallest), secondary (the largest), and college sections, each with its own journal and representation on the board of directors and the executive committee. Membership totals are difficult to come by because of overlapping and multiple memberships of individual bodies in various subdivisions of NCTE; a good guess is something in the neighborhood of 50,000 individual members. This number is decreasing by perhaps 1 per cent per year (institutional memberships by about 3 or 4 per cent per year), probably due to economic factors, changes in the philosophy of the journals under more liberal editors, the rise of popular specialty journals (e.g., *Media and Method*), and an increasingly responsive approach to social issues which does not always appeal to the more conservative members of the council.

Why do people join NCTE, a "professional" society whose application blank asks only for the name and address of the applicant and which journals he wishes to receive? The council provides a sense of community for members of a rather lonely profession, as well as an opportunity for the exercise of leadership which the profession alone frequently does not supply. There are journals, meetings to attend, the usual assortment of insurance and tour packages, and a placement service (through CCCC–Conference on College Composition and Communication). There is an informal information service; the headquarters can arrange speakers and answer a variety of questions for members, not all of them directly relevant to professional concerns. And there is clout–power that the council can provide (or that the members think it can provide) on such socially and intellectually important issues as the new copyright law, censorship, competency- or performance-based teacher education. About 20 per cent of the membership is fairly active; the other 80 per cent probably do little more than fill spaces on a mailing list. The contribution they make to the improvement of English teaching as a result of their involvement with NCTE is, of course, not subject to evaluation.

Affiliates of the council are geographically distributed organizations of teachers (or students) of English which apply for affiliate status. Officers (but not necessarily members) of these groups must be members of the council. Affiliates pay annual fees (fixed by the by-laws) to the National Council, have written constitutions which provide for continuity of administrative personnel, submit annual reports to the council regarding their projects and problems, meet at least once a year, maintain close communication with the council through a liaison officer, and keep their members informed about council (and other professional) concerns. The council, in turn, is responsible for keeping affiliates informed of its policies and programs and helping them to plan and carry out useful action on the basis of those policies at their particular level of influence. Affiliates have one to three members on the board of directors, depending upon the size of their local organization.

Clearly, the board of directors of NCTE is a representative body of the membership, and recent amendments to the council constitution have sought to make it and the rest of the council leadership bureaucracy more responsive to members' needs and wishes. As presently constituted, this policy-making body is composed of members of section committees, council officers, officers of conferences, directors of commissions, chairmen of council committees, editors of council periodicals, and the representatives of affiliates.

The fiscal responsibility and authority of the council is vested in the executive committee which is composed of the officers of the council (president, president-elect, vice-president, and past president), the chairman and associate chairman of the sections, two representatives at large (one elementary and one secondary school teacher), and the chairmen of CCCC and CEE–Conference on English Education. All officers of the council (including the Nominating Committee) are elected by mail ballot of the membership.

In addition to the three sections of the council, the affiliates, and the various committees and commissions, there are three other types of working subdivisions of the membership: conferences, task forces, and assemblies. Task forces are specially created groups of members charged with carrying out specific, high priority projects. There is currently a Task Force on Racism and Bias in the Teaching of English. Assemblies are relatively small groups of members who share similar jobs or common interests in a special topic. One assembly (on adolescent literature) has so far been established. Conferences are authorized by the executive committee, usually for an indefinite period of time, for the purpose of exchanging views and information on specific professional topics. Three such groups are currently in operation under the council: the Conference for Secondary School English Department Chairmen (CSSEDC), the Conference on English Education (CEE), and the Conference on College Composition and Communication (CCCC). CEE is primarily concerned with teacher education and has its own Task Force on Performance Based Teacher Education, Certification, and Re-certification. The theme of its 1974 convention is "Reaction, Recovery, or Revolt: English Education 1974-1984," a theme which grew out of the current political, economic, and educational crises. CCCC has individual commissions on teachers in non-traditional programs, composition testing procedures, grading policies, and English teacher training in four-year colleges. Its most recent position statement, which it is currently seeking ways to implement, concerns a student's right to his own language or dialect free from interference by the school's efforts to promulgate some established "standard" American English dialect which does not really exist:

> We affirm the students' right to their own patterns and varieties of language—the dialects in which they find their own identity and style. Language scholars long ago denied that the myth of a standard American dialect has any validity. The claim that any one dialect is unacceptable amounts to an attempt of one social group to exert its dominance over another. Such a claim leads to false advice for speakers and writers, and immoral advice for humans. A nation proud of its diverse heritage and its cultural and facial variety will preserve its heritage of dialects. We affirm strongly that teachers must have the experiences and training that will enable them to respect diversity and uphold the right of students to their own language.

The conference's resolution, a paper containing background information in support of it, and an annotated bibliography on the subject are being circulated by CCCC. Unfortunately, the resolution will not become council policy for the present; council leaders do not feel that the membership would pass favorably on such a resolution at this time, and they prefer that it not have to carry the stigma of a negative membership vote.

The Committee on Research and the Committee on Teacher Preparation and Certification are standing committees of the council. The latter group has just begun planning for an interpretative statement on the English Teacher Preparation Study (ETPS) guidelines to serve the needs of English education in the seventies and eighties. This statement will include a brief explanation of the need for reinterpretation (rather than re-writing), a list of necessary "experiences" for prospective teachers, a list of essential "competencies" to be developed in training, and an appendix containing summaries of several model teaching programs. This approach would bring the guidelines into consonance with the council's present emphasis on competency-based teacher education. It should be pointed out in this connection that the council is on record as favoring putting prospective teachers into the schools earlier in their college career for the purpose of on-the-job training. Moreover, NCTE has two members on the board of NCATE, two members on the board of AOTE, is a consultant to AACTE, and sponsors an International Steering Committee of NCTE/MLA and other English groups. The NCTE worked closely with the MLA in fostering the present NASDTEC guidelines for approving programs. It is also seeking grant money to set up a consulting service for junior college English programs which would involve site visits and program approval.

Finally, NCTE is actively trying to generate a new Basic Issues Conference.

The many individual committees of the council are too numerous to list here, but they deal with a wide range of subjects, such as academic freedom, censorship, collective bargaining, educational technology, innovative grading practices, pre-school literature experience, minority literature, "public doublespeak," the role and image of women in the profession, teaching English to speakers of other languages (TESOL), and teacher workload. For example, the Committee on Public Doublespeak grew out of two resolutions on "public lying" passed at the 1971 convention business meeting: that NCTE "study dishonest and inhumane use of language and literature by advertisers, to bring offenses to public attention, and to propose classroom techniques for preparing children to cope with commercial propaganda;" that NCTE "study relation of language to public policy, to keep track of, publicize, and combat semantic distortion by public officials, candidates for office, political commentators, and all those who transmit through the mass media." This committee plans to produce four publications directed at secondary and college teachers (with practicum), a series of workshops, and a regular journal column. Some of the results other committees have achieved include a policy statement on class size and teacher workload for secondary schools, a 1974 Seminar on Indian Education, and a study on identification of effective teaching behavior for elementary school reading and language arts programs.

Another major issue for NCTE at the present, one that is not specifically tied to any single committee (but one that ought to be the concern of every professional society) is the misuse and abuse of standardized tests. The 1973 convention of the council passed the following resolution:

> . . . that NCTE executive committee select and employ the most expeditious means at its disposal for the consolidation and the broadest possible dissemination—among teachers of English, among other persons directly concerned with English instruction, and among members of the general public—both facts and informed opinions currently available concerning problems related to standardized testing instruments and procedures in the field of English; and, in the process of such dissemination, place particular emphasis (1) upon the limitations of many standardized tests, (2) upon ways in which some standardized tests have been and

> continue to be misused by those choosing and by those administering them, and (3) upon the dangers, both to students and to the processes of English instruction, when results of such tests are misinterpreted, are accorded undue reverence, or are otherwise abused.

As a result of this resolution, the council has applied to its own research foundation for a grant for a definitive study of the effects of such tests on English language arts. Moreover, a "kit" has been prepared, containing publications on the uses, abuses, and misuses of standardized tests, with suggestions for media campaigns on the abuses of testing; this kit will be sent to all NCTE affiliates with a directive to bring it to professional and public attention.

NCTE publishes a wide range of journals dealing with English education at all levels, as well as research and innovation in pedagogy. Many of these provide an opportunity for a forum among teachers on teaching ideas and practices. *College Composition and Communication* has a section called "Staffroom Interchange;" *English Education* includes "Point/Counterpoint;" *College English* invites brief articles of rebuttal to any articles it publishes; and *English Journal* includes not only a letter column, but also sections called "Teaching Ideas," "Viewpoint," "Resources" (a quarterly roundup of teaching research sponsored by the research committee), "EJ Workshop" and "Junior High/Middle School Workshop." It should be mentioned in this connection that NCTE also houses the ERIC Clearinghouse on Reading and Communication Skills (sponsored jointly by NCTE and NIE); and Research in the Teaching of English, an official bulletin of NCTE, publishes a semiannual annotated bibliography on research in the teaching of English compiled by the clearinghouse.

The money to run NCTE comes primarily from membership dues and subscriptions, income from publications, and advertising in the journals. NCTE's financial picture is not quite as bleak as that of some of the other professional societies. Its budget of just under two million dollars is still operating in the black, though not by a comfortable margin. Robert Hogan attributes this relative economic success in part to the physical location of the headquarters in Champaign-Urbana, Illinois, where office expenses and salaries are significantly lower than they would be in Washington or New York, and to the fact that the council publishes and prints nearly all of its own publications on the premises. He admits that by being so far from the Washington crush of professional society executive secretaries, NCTE may miss some opportunities to exert influence or inform the relevant branches of government; however, he feels that the council still has sufficient input at NIE and USOE, and that the relative peace the headquarters staff enjoys by not being on constant call to attend hearings and committee meetings makes their job easier.

NCTE is unusual among professional societies in that the greatest impetus for change and for real and even radical improvement in education and teacher training in more humane directions comes from the leadership of the society rather than primarily from the membership. Since it is an association almost exclusively of teachers at all levels of English education, it has the opportunity to make a significant impact on what actually goes on in the schools if it can really motivate its members. Although it is centered in the problems of teaching in the schools and higher education, it is not second-rate intellectually. And some of the [illegible] statements in which scholarship focuses on and speaks to issues of school and societal policy are communicated through NCTE journals and other council channels.

MODERN LANGUAGE ASSOCIATION

> . . . at some point during the past ten years the association recognized itself as being something more than a society of the learned, something more than a private club for gentlemen and gentlewomen. What has evolved is an awareness that the MLA is truly an association of, by, and for all the members of our profession, and as such has both the capacity and the willingness to respond to a wide variety of professional concerns. (Report of the Executive Secretary, MLA, December, 1972, p. 540.)

> The MLA's power lies in its strong stomach, in its capacity to digest almost everything, thus giving it institutional sanction. It can do so because the professional standards it allegedly maintains do not exist: there is no basis on which to exclude anything. Clearly the MLA, rather than being a professional organization, is a trade association; its natural drift is toward the councils of the Chamber of Commerce, where it will best serve the social and economic aspirations of its own membership. (Louis Kampf, *The Dissenting Academy*, pp. 51-52.)

MLA is many things to many people. And since humanists never tire of introspection, of critical appraisal of their own institutions, and of seeing the fruits of such labors in print (or at least in typescript), we have from the mouths of its members and critics the best testimony of what MLA has been and is, what it has done, is doing, hopes to do, will become. The two statements above represent the two strongest viewpoints prevalent in the MLA in recent years. The first (the most recent) is the establishment view which sees the association as having become a professional society with a strong commitment to the career concerns of its members. The second expresses the sentiments of the radical caucus of the MLA which was born in the 1968 annual convention and now, practically speaking, is represented only on a few MLA committees, such as the MLA Commission on Women. It might be interesting to consider, first of all, what happened at that convention in order that the present efforts of the association can be seen against the background of its recent history:

> Beneath the hostility that was driven to the surface at the

> 1968 meeting by the Vietnam war, the siege of Chicago, and allied events, the membership of the MLA did indeed retain some fraternal and metaphysical ties. Although one group was trying to preserve what the other was trying to alter or destroy, both seemed to know, as I shall try to illustrate, something about their corporate metaphysical life as organized literary scholars. They knew that their association with one another was mediated by a highly formal bureaucracy, which operated abstractly and legalistically, [illegible] dissent, and made action a breach of decorum. They knew that the MLA is a meritocracy of scholarship, and that those outside of its elite could not expect to influence the course of its policies—this in spite of the obviously genuine intention of the secretariat to serve the whole membership. Both groups had also absorbed the ethos of professionalism, which insulates all such groups from any challenge by amateurs, neophytes, or outsiders. Again, they knew well that politics is to scholarship as drink is to driving. Finally, they had learned that culture is in old books, and that it stopped some time ago. These are the tacit principles taught by the corporate structures we have built for ourselves. They bear examination, as does the question they raise: Why should the impact of a corporate effort such as the MLA accord so ill with the values to which an overwhelming majority of the members explicitly subscribe? (Richard Ohmann, "An Informal and Perhaps Unreliable Account of the Modern Language Association of America," *The Antioch Review,* Fall, 1969, p. 331.)

The essential features of the MLA seem to be an emphasis on professionalism, reverence for scholarship, avoidance of certain kinds of political action, and an increasingly complex bureaucracy. MLA was probably never very democratic in practice, having always been run by a rather narrow group of literary scholars of unquestioned stature and obvious notoriety. But it did have the open business meeting at the annual meeting—something of a joke, to be sure, since few members attended the session, so little interest had they in the dry-as-dust matters of how the association was run. In 1968 the more radical members of MLA did attend the business meeting in force, adopting several liberal political resolutions and electing one of their number (Louis Kampf) to the highest office. Following the intense reactions of members who felt the ivy had been uprooted and the ivory towers of scholarship and professionalism sullied, the MLA bureaucracy took several steps to restructure the organization and complicate its operating machinery in order to make such a takeover ever after impossible. The tensions which lay beneath these charges are best understood as they are remarked by several members, on the right and on the left, in connection with the 1968 sit-in:

Professionalism vs. Political Action:

> 1. "What I want to mark is the conclusiveness that is supposed to attach to the word 'professional.' If you can appropriate that word for your side, you have quite flatly won the argument. . . .
>
> "'Professional standards' means simply the standards of those who have achieved prominence in the profession. . . . The profession exists so that there may be a means of accreditation and advancement for people in the profession, not out of any inner necessity, and certainly not out of cultural need, or the need of individual teachers. . . .
>
> "Has the MLA pursued a single political course at all consistently? Mostly it has pursued the politics of neutrality and guild interest, which means, basically, enforcing the status quo." (Richard Ohmann himself, Ohmann, p. 339, 343.)
>
> 2. "We urge the Executive Council to affirm the professional character of the association." (Petition to the association from twenty-four distinguished scholars from Duke and North Carolina Universities, following the 1968 upheaval. Ohmann, p. 339.)
>
> 3. "I resent the fact that the MLA staff is doing nothing to prevent the association from becoming a political rather than a professional organization. I resent the fact that there is now no national meeting at which I can talk about eighteenth-century Spanish literature without the fear that someone is going to ask me in what way it can be made 'relevant' to Vietnam.." (Letter to John Hurt Fisher from an irate member after the 1968 convention. Ohmann, p. 339.)

Scholarship vs. Relevance:

4. "Quite simply, the Modern Language Association is governed by a handful of scholars. Nominations are made by a nominating committee of scholars, who naturally equate merit with their own style of achievement. When the members are allowed the luxury of a vote, they take the cue readily enough, and vote for the best-known scholars." (Richard Ohmann himself, Ohmann, p. 333.)

5. Mr. Kampf, I am curious to know whether, considering the infinitesimally small [sic] members-come-lately of the MLA who nominated you for the second vice-presidency of the MLA, you would really undertake to serve as president, assuming the unlikely possibility of two more such fluke elections as the last one. If so, I suggest that you have a look at the list of distinguished scholars who have been presidents of the association. . . . If you do [undertake to serve as president], I should think the membership should be given a list of your scholarly attainments." (Letter to Louis Kampf from an MLA member following the 1968 convention, during which he was nominated as second vice-president, a position in direct line to the presidency. Ohmann, p. 336.)

6. "Departments of language and literature exist not because of our students' human needs, not because they represent transcendental categories, not to give play to our curiosity, our need to know, but because they help to rationalize the process of educational consumption and production. As does the MLA. We are members of a modern professional organization with a corporate structure, a large bureaucracy, appropriately elegant quarters, underpaid secretaries and clerks, a computer, sections, groups, insurance plans, charter flights, competing cliques and individuals trying to hold on to and enlarge their piece of turf. Any professional organization's primary task is to help rationalize its field by putting the official seal of the going standards, creating both formal and informal networks of power, integrating the field into the larger society, and making the distribution of manpower more convenient for employers. The MLA has served the industrial

> state well enough. . . ." (Louis Kampf's MLA presidential address, *PMLA*, LXXXVII, 380.)

Democracy vs. the Delegate Assembly:

> 7. "By replacing the business meeting with an Assembly of elected delegates, a carefully structured microcosm of the entire membership, the association has provided what the MLA has always lacked—a responsible and representative body of concerned members who, through informed discussion and debate, can intelligently guide the council in shaping future policy and in establishing new directions and goals. . . . The assembly is a daring experiment in association governance, and one in which most of us who were involved in its creation have great faith." (William Schaeffer, Report of the Executive Secretary, *PMLA*, 1972, 540.)
>
> 8. "The MLA. Perhaps it is too much to expect a real transformation here. The monster has been shaken. But its response to every challenge is to create machinery that will absorb the shock—as is the case with the Delegate Assembly. . . ." (Kampf, *PMLA*, LXXXVII, 382.)

The principle governing body of the MLA was and is the Executive Council. 1970 saw the stabilizing of its ship when the annual convention approved a major constitutional revision, replacing the annual business meeting with the Delegate Assembly, a policy forming group which is expected to work with the Executive Council and which generally meets during the annual convention. Members of the Executive Council also sit in the Delegate Assembly. Officers of the association, who are elected by the membership at large, are nominated by a nominating committee comprised of seven members with rotating two-year terms. This committee is also elected by the Delegate Assembly from a slate prepared by the three officers; there are at least two nominees for each position, and any five members of the assembly may by petition propose an additional name. Voting is by secret ballot at the meeting of the assembly. Petitions for additional candidates, who any member of the association may initiate, must include the consent of the candidate and the signatures of at least fifty current members. Although anyone may be elected to any office at any time, the usual practice has been to elect a member to the office of second vice president, after which he moves on to become, in succeeding years, first vice president, and then president. Finally, there is an executive secretary, who also acts as general editor of all publications and who is appointed by the Executive Council which supervises the administrative structure of his office.

The Executive Council now appoints a committee representing a broad spectrum of interests of MLA members to determine what resolutions will be presented to the Delegate Assembly. Resolutions may be submitted to this committee at any time up to twenty-four hours before the meeting; however, those which reach the committee up to one month prior to the meeting need the signatures of only twenty-five members, while those that arrive within the month before the meeting must have the signatures of fifty members. The committee also proposes resolutions on its own initiative. Upon petition of 1 per cent of the active membership of MLA, any action of either the Executive Council or the Delegate Assembly shall be subjected to a mail ballot of the membership. (Between 1969 and 1971, only about a third of the approximately 30,000 members participated in association elections.) There is also a standing committee on amendments composed of five members appointed by the Executive Council. This group receives proposals from the Delegate Assembly, the Executive Council, or any group of twenty-five members. All amendments must be printed nine days before the meeting at which they are to be voted on. They must first be approved by a majority of the Delegate Assembly and then ratified by a majority of the membership. It is easy to see how the structural changes occasioned by the events of 1968 severely limit the possibility of direct democracy in the association.

The expressed purpose of MLA, from the constitution of the association is "to promote the study, criticism, and research in modern languages and their literature and to further the common interests of teachers of these subjects." There are two classes of members of the association: regular members are persons professionally interested in modern languages and their literatures, and their membership is subject to approval by an officer of the association; student members are graduate students engaged in a course of study leading to a degree in the fields of modern languages and their literatures who do not hold full-time teaching positions, and their membership may be approved by an officer of the association for no more than four years. Seventy-four per cent of the members are regular members, 26 per cent are students; 40 per cent of the total membership are in foreign languages, 60 per cent in

English. Recent years have been difficult financially for the Modern Language Association, and it has engaged in a series of discussions about the level of dues and income, the construction of an open budget, and the restructuring of budgetary priorities to make the association more responsive to society. "Ture" income comes to the association from membership dues, the annual convention, dividends and interest, and the publications center, which has not, unfortunately, been doing as well in the last couple of years as it has expected to do or has done in the past.

The Modern Language Association is subdivided in many different directions, but the first and most important of these divisions is the split between English and foreign languages. Foreign language people and English people really have very little to do with one another, except with respect to purely business matters of the association and by reason of the fact that PMLA serves all members. The Association of Departments of English (ADE) and the Association of Departments of Foreign Languages (ADFL) are the children of MLA (they are still subsidized by the parent organization) which represent the interests of professionals in these two broad areas.

At the Grove Park Conference of CONPASS, F. Andre Paquette, a member of both MLA and ACTFL (which is partially subsidized by MLA), outlined the activities of the relevant professional associations directed toward teacher training in the foreign languages. In 1955 MLA published *Qualifications for Secondary School Teachers of Modern Foreign Languages*, which proposed appropriate levels of competence in listening, speaking, reading, and writing foreign languages, proper professional preparation, and standards for education in applied linguistics, culture, and civilization. Following this, and for approximately the next ten years, various surveys were conducted to determine what was actually going on in foreign language teacher training, with the following results: The *MLA Foreign Language Proficiency Test for Teachers and Advanced Students* (1959), which is used in the NDEA Institutes, covers many areas of language study from listening to applied linguistics, and is available in French, German, Italian, Spanish, and Russian. (In fact, the MLA foreign language program of the fifties played a significant role in shaping the NDEA foreign language program.) The *Guidelines for Teacher Education Programs in Modern Foreign Languages* were published in 1963. In the report of the Grove Park Conference, *Five Levels of Incompetence*, Paquette describes what is, in his view, the current situation in foreign language, its negative as well as its positive aspects. He says that there are currently more enrollments in foreign languages and more variety in curricula. There is a new focus for professionalism among foreign language teachers, and there is the ACTFL which publishes an annual bibliography on teaching foreign languages, the federally funded ERIC Clearinghouse on Language and Linguistics, and an annual review of research. On the other hand, there has been little success in determining adequate proficiency measurements or in doing away with course counting. There is no correlation of programs between school levels, no teacher certification based on proficiency, no widespread elementary school foreign language teaching, little or no concern for bilingual students, and large teacher turnover. He asks, in conclusion, whether the endless lists of requirements have themselves bred poor teaching and whether, in fact, foreign language teachers are simply in the business of perpetuating themselves. MLA's efforts on behalf of minority literatures have been rather limited. Its intervention in the schools has been directed largely toward English and foreign language institutes, money for the profession, and changes in licensing laws. This activity does not bear any consistent witness that MLA, despite its interest in the humanities, is more capable than other guilds–say those in the sciences–of setting aside professional self-interest in favor of the public interest. On the other hand, the MLA is very active with matters which may be seen as serving the public interest *or* serving guild interest, depending on one's perspective. Consider MLA's Association of Departments of English, for example.

In January, 1972, Michael Shugrue, past secretary for English of MLA and, until recently, coordinator of ADE, prepared for Alan Hollingsworth a statement of the principle activities of ADE in teacher education since 1964, based on a review of ADE Bulletins since 1964 and notes on ADE meetings since 1965. A summary of this statement may help to illuminate the depth of ADE's interest in the improvement of the quality of teacher education. Since 1964 ADE has conducted five surveys on teacher salaries and has published substantial amounts of data on teaching load and manpower needs, the latter in conjunction with the American Society for Training and Development. ADE published material from Thomas Wilcox's *National Survey of Undergraduate English Programs.* In 1971-72 there was a survey of freshman English requirements, and also in 1971 there was a survey of the impact of new state legislation on higher education in English. There have been several surveys of graduate enrollment and programs. The bulletins have also contained information about various Doctor of Arts programs. There have been articles about collective bargaining, threats to tenure, teaching conditions, work load, and women's and minorities' rights. A Committee on Practices in Recruiting and Hiring is responsible for *Vacancy Lists,* which began in 1965, and *Job Information Service,* 1971. Meetings and essays about graduate education concerned themselves with trends in graduate education and the Graduate Record Examination. Bulletins have contained articles about innovations in freshman English, an essay on the preparation of junior college teachers, two-year colleges, and the National Junior College Study. Curriculum reform and evaluation of teaching has been the subject of summer seminars, as well as essays in the bulletin. There have been reports published concerning two programs aimed at improving undergraduate curriculum. ADE began in 1970 to present Certificates of Excellence in the Teaching of English in an attempt to recognize outstanding teaching in introductory English programs. ADE has published guidelines developed during the English Teacher Preparation Study, the National Junior College Study, and the Study of Graduate Programs in English.

In 1964 a resolution was passed by ADE which stated that English Departments should take advantage of NDEA "by setting up institutes for teachers of English in the high schools, staffed by capable and interested teachers, utilizing fresh and intellectually challenging subject matter and that they follow up these institutes with a formal and continual relationship between their own work and what is being taught in the high schools." ADE participated in the Conference on Elementary Language Arts Institutes (UNL, 1966), the CONPASS Grove Park Conference (1969), and the Gull Lake Conference (MSU, 1969). The association helped TTT (at the University of Pittsburgh and Southeastern Oklahoma State College) to plan regional teacher training meetings. Finally, in 1971-72 ADE applied for a USOE grant, in order to sponsor seminars for department chairmen in their role as teacher trainers.

In the future Shugrue suggests that ADE might:

> . . . establish a task force to provide a cadre of knowledgeable leaders to visit various institutions to work with faculty to set up interdisciplinary programs. Small grants could also assist ADE in bringing together people from the American Society for Training and Development and from the human resources divisions from businesses and industry to identify job opportunities outside of

> teaching, to enlist the support of business and industry in working with departments to make these jobs known and to make recommendations on needed changes in undergraduate and graduate English programs. . . . Perhaps most important, ADE needs about $100,000 to undertake the study on Language, Literature and the Responsible Human Being which MLA and NCTE had hoped to have funded by the National Endowment last year. (Unpublished letter.)

Shugrue concludes: "I believe that the association has a just claim to being the principle spokesman for the English profession as a profession of teachers, teacher educators, and colleagues interested in improving the teaching and learning of English at every level." This last activity, on "Language, Literature and the Responsible Human Being" has not been funded by MLA or the agencies which contribute to it.

No discussion of MLA would be complete without some consideration of its publication program, which is tremendously influential in scholarly circles. PMLA, recently reworked structurally, now requires that articles be of such significance as to justify bringing them to the attention of the large and diverse audience the publication reaches. In the 1972 report of the executive secretary, William Schaeffer remarked that the changes proposed for PMLA were "all designed to make PMLA the single source through which members of the profession can be kept informed of developments in scholarship and criticism in all areas of modern language and literature." MLA also publishes an *International Bibliography* which reaches some 5,000 libraries and 30,000 readers; *The MLA Style Sheet*, which is used throughout the profession by students and teachers alike, as well as by many other publications as their standard manual of style; *Job Information Lists*, which contain information from nearly 80 per cent of all English and foreign language departments and which were the source of information for almost half of the successful job applicants in the first year of publication; the bulletins of ADE and ADFL; a newly expanded newsletter, which reaches all MLA members. MLA is also responsible for the Center of Editions of American Authors. Projected publications include computerized versions of the bibliography and abstracts; *Cumulative Bibliographical Guides to Research;* and *Language and Literature Today*, the humanities counterpart to *National Geographic, Scientific American*, and *Psychology Today*, which has been proposed partly as a public relations device and partly as a new source of revenue to help extricate the association from its relatively grim financial situation. MLA's part in *Guidelines for the Preparation of Teachers of English* has already been discussed in the introduction to the humanities.

Some mention must also be made of a document entitled "Structuring the Scholarly Interests of Members Within the MLA." This paper, which was presented to the Delegate Assembly at the December, 1973, meeting, along with recommendations to the Executive Council, is the result of a survey conducted during 1973 of membership interests in the association. It proposes a revision of the sectional structure of MLA to better reflect the real interests of all the members and to do away with sections which no longer attract any attention but which continue on, with or without membership participation, to provide a platform and a refuge for aging, entrenched scholars whose reputations require such courtesies. The sixty to sixty-five sections proposed would all have representation in the Delegate Assembly and individual elected executive committees, and they would sponsor small special sessions, somewhat larger discussion groups, and large broad conferences at the annual meetings. The proposed sectional breakdown actually follows, for the most part, traditional scholarly lines; and the suggestions for its influence on the meetings of the association and the separatism of sectional activities would seem to insure that members interested in "late 19th- and early 20th-Century American Literature" need never even talk to members interested in "late 19th- and early 20th-Century English Literature." Probably this has always been true anyway.

MLA's political activities, like those of other professional societies, must largely be deduced from their results. Some members would like to think that such associations of scholars do not meddle in political affairs. This must naturally be taken with several grains of salt. An example: In response to a letter from the Chief of the Manuscript Division of the Library of Congress, the MLA's Executive Council instructed the executive secretary to determine the feasibility of the American Council of Learned Societies' getting more involved in "federal appointments of concern to the profession." Its role in NEH and NDEA have already been discussed.

MLA is deeply interested in what it considers to be the current trends in the teaching of English. The leadership believes teachers of English are seeking new roles, new areas of activity aimed at placing the teaching of one's own language more surely within the contemporary scene. English teachers are moving more forcefully into the teaching of reading, especially in urban areas, and serious attempts are being made to integrate comparative literature with social sciences. Basic Studies, a unified approach to English, history, and other humanities and social studies, is the current curricular result of such activity in some school systems. How MLA can function to exert influence for improved teaching of English and foreign languages beyond the guideline-writing stage has not been well articulated. Even more, important is the question of what moral and ethical responsibilities for the creation of humane societies students of their literary products have. That question was at the center of the 1968 sit-in and discussions, and it still has not been resolved.

AMERICAN THEATRE ASSOCIATION

The American Theatre Association (formerly the American Educational Theatre Association) was organized "to promote the highest standards in theatre practice, teaching, scholarship, and research; stimulate creativity in theatre arts; and to produce a general understanding and appreciation of theatre as an art, a discipline, and as an institution." (*Encyclopedia of Education*) According to its constitution, as amended August, 1968, "The purpose of this corporation shall be exclusively educational within the intendments of §501 (c)(3) of the 1954 U.S. IRC, stimulating and organizing for young people educational theatre experience of the highest possible standards." The focus of the association, according to its executive director, Anthony Reid, is on developing programs in educational and children's theatre, although there seems to be some confusion over whether the emphasis should be on production or instruction. Like all such groups, it is heavily in pursuit of funding. For this purpose, as well as for programming, ATA is trying to regionalize.

People join this fairly democratic organization for many reasons, among them the help it can provide with placement, obtaining funding, and setting up programs. The average member of ATA is between twenty and forty years old and became acquainted with AETA while in school. The majority of members hold an M.A.; 58 per cent of members work in colleges and universities, 14 per cent in high schools, 8 per cent in children's theatre, and 7 per cent in community theatre. The membership is not growing, and efforts are being made to attract undergraduate members. Perhaps for this reason, all members, including students, may vote and hold office. The association recently underwent a name change and became a federation composed of autonomous divisions of the old AETA. Officers are elected by the membership at large, but, unfortunately, there is no representative assembly. Editors of journals are appointed by the president of the appropriate affiliate association for three-year, renewable terms (which are seldom renewed). The board of directors appoints an administrative vice-president. No government money comes into ATA, and it is largely supported by dues, publications, the annual meeting, and some grants. These last come from NEA, private foundations (e.g., Ford, Rockefeller), and private corporations (e.g., AMOCO, American Airlines, U.S. Steel).

Anthony Reid claims that the association is "committed to recognizing and encouraging the input of the educational force in theatre production" but that theatre production in and of itself is not the prime function of ATA; nevertheless, the association seems to be extremely interested in children's theatre, especially, and in other types of production as ends in themselves. It develops and publishes materials for use in children's theatre and secondary schools. In 1970 it published a Survey of the Status of Theatre in United States High Schools. ATA also develops and publishes materials for use in colleges and universities and community theatres and attempts to stimulate creative activities and scholarships in educational theatre and allied fields. The association has never before been seriously interested in teacher training; it has no accreditation function and previously focused its efforts on distribution of information rather than the production of knowledge through research, as is characteristic of a "discipline" in the sense in which Toulmin uses the word. In fact, the association has had little or no impact on undergraduate education in general or theatre education in particular, although it would certainly like to change this picture. In this connection, it hopes to build on the increasing emphasis on the use of drama for role playing in education and as an educational process in itself. Thus the group may form some liaison with social scientists (e.g., Goffmann-type sociologists).

ATA has made serious efforts, especially through lobbying on the part of individual members, to get more money for NEH and even ran a series of articles on how to lobby. Representatives of the organization have met with the U.S. Commissioner of Education to discuss the future of theatre arts and arts education in USOE. Clearly ATA is trying to make a larger place for itself among professional societies. Whether or not it is succeeding in its current efforts to expand, it is clear that some very exciting work in theatre education is going ahead.

OTHER HUMANITIES SOCIETIES

A few professional societies concerned with education in the humanities have a more limited sphere of influence and activity than do major organizations like MLA or NCTE. Nevertheless, their efforts to improve undergraduate education and the education of teachers deserve some consideration here.

The American Philological Association's Committee on the State of Classical Studies has sponsored a project in which classically trained teachers participate in developing better methods of teaching humanities at the secondary level. Another project in which this committee has maintained an interest involves teaching Latin and language skills to elementary school children, particularly from ghetto areas. The association's activity seems, however, to be limited to monitoring projects originated and conducted by individual classical scholar-educators at their own institutions.

The American Studies Association has a committee which is active in working to set up American Studies programs in schools and in trying to get American Studies approved for teacher certification. This organization favors an interdisciplinary, topic-oriented approach to American culture, and its programs emphasize independent study and special topics courses. The National American Studies Faculty, an outgrowth of the association, sponsors teaching conferences and institutes, museum liaisons, and a public high school consulting service.

The Association for Asian Studies, through its Committee on Secondary Education, has established a Service Center for Teachers (in Columbus, Ohio), sponsors an annual panel on the importance of secondary education, and, with federal support, sponsored two conferences in 1970 to evaluate various approaches to Asian Studies in secondary schools (proceedings published by USOE).

The Association of Teachers of English as a Second Language is concerned primarily with international students at American universities. However, it has developed guidelines for a teacher education program for postgraduate students in English as a second language, based on the English Teacher Preparation Study and the foreign language guidelines.

The International Reading Association has a number of committees that bear on teacher education. The Committee on Evaluation of Teacher Education Programs in Reading has developed criteria for appraising teacher education programs in reading conducted by colleges and universities. In 1973 the association published a checklist prepared by this committee for use by students, prospective students, teachers, teacher trainers, and institutions to evaluate reading teachers and programs of teacher education in reading for competency. Another committee develops material for conducting in-service programs. Still another was established to prepare guidelines for the selection, training, and supervision of para-professionals in the teaching of reading. The Commission on Quality Teacher Education of the association critically examines teacher training models and develops models for pre- and in-service teacher training in reading instruction. Finally, there is a committee to help school personnel evaluate instructional materials in reading.

The Linguistic Society of America has become increasingly interested in teacher training and pre-college education generally. Their study group on language in public education has attempted to identify areas of education where language research has fruitful implications for educational programs. This study group is also making an effort to define the quality and evaluate the significance of the potential contribution of linguistics to the design, modification, and administration of educational programs; moreover, it is exploring and assessing the most suitable means to assure that the results of these studies are available in usable form to the individuals and groups whose actions will make a difference in the reform and conduct of education. What those groups might be is not precisely defined. Some of the specific topics they have been exploring include the relationship between language maturation and mental development, what aspects of English can be treated most profitably in grammar courses and how, and the concentration on trivia rather than on the unifying principles of language in most elementary and secondary English grammar education. The society also maintains a survey and information service on linguistics courses and curricula in American colleges and universities.

The Speech Communication Association, the last of this group of societies, presented a proposal to the USOE in October of 1971 for a project designed "to identify major clusters of functional speech communication behaviors which are important to all children, to construct specific performance objectives related to the major clusters of speech communication behaviors, to specify instructional levels for which the specific performance objectives are appropriate, to identify alternative instructional strategies for achieving the stated objectives, and to evaluate the usefulness of the performance objectives and instructional strategies in diverse kinds of learning environments." There was little hope that this project would be funded, however. The association has worked with NASDTEC and the American Theater Association on guidelines for teacher education in speech, with emphasis on teacher competencies rather than on courses. Under the sponsorship of the association a group of college and university speech education specialists planned to consider a "status assessment of the preparation of speech teachers as presently constituted and to generate recommendations for improvement and reform." The association is also interested in analyzing the place of speech in career education. Other concerns of the association deal with a possible relationship between research into the development of language and classroom practice in speech education, the development of advanced placement programs for speech, and the function of communication theory and research in the study of learning processes and teacher preparation. The association also has an Educational Policies Board and conducts short teacher training courses at its meetings.

INTRODUCTION TO SUPPLEMENTARY ESSAY VI:

ENGLISH DEPARTMENTS AND THE PROFESSIONAL ETHOS

In examining the professional societies in the physical sciences, we have endeavored to concentrate on the limitations of 'pure scientists' as they carry the mantle of pure science into the world of politics and education (their potential for using the 'garments of professionalism' to advertise their work, create a market for it, and manufacture Congressional support; their tendency to educate children in their scientific area as if the only use children could make of it would be in further study [preferably graduate study] rather than in their roles as citizens; and their tendency to use projects in the undergraduate and school world to puff enrollments, raise money for the profession, or force professional society memberships).

In examining the professional societies in the social sciences, we concentrated on the extent to which these societies, representing putatively 'disengaged professionals,' fail, or have sometimes failed, to present for inspection a version of social reality which allows students as citizens to act with maximum intelligence on the political forces which act on them. The professions may do this through sacrificing accuracy to precision; through eliminating much of the unpleasant side of what goes on in society or mythologizing it; through failing to give the student a good understanding of racism, of other cultures, or of the political process; or, finally, through failing to engage the student in a community-specific analysis of the social forces at large in his world–stock markets, trade unions, consumer protection laws, block busting realtors, or whatever else acts on his neighborhood. They also do this through splitting social reality among the several social science disciplines in such a complex fashion that students may never get a handle on the whole (though fragmentation is less a problem now). The problems which we have looked at are both endemic to the professions which we have scrutinized *and, simultaneously, prevent these professions from accomplishing much of the good in whose name they claim support from society.*

If the sciences strut and the social sciences mumble, the liability of the humanities professions may be their insufficient humanity–their elevating of a 'professionalism,' which alienates people from their own eidola and artifacts, above concern for the specific people who 'make' and 'consume' songs, pictures, plays, rituals as part of the society-constructing process.

In the case of the social and the physical sciences, we have concentrated on the professional societies as national networks which act (in consort with NCATE, NASDTEC, accreditation mechanisms, federal agencies, and the Congress) to produce a certain kind of nationally ratified education. But education in the U.S. is primarily a matter of departments–school departments, college departments, and even now grade-school departments. As Lawrence Freeman has demonstrated in "The Management of Knowledge," departments were deliberate social productions created in the early 20th century to standardize relations to the secondary schools; departmental credit hours were required by pension plans and other management schemes external to education. It is in the department that the "sense of the profession" developed by the idea-builders in the [illegible]nal professional groups finds its embodiment. The essay by Richard [illegible] follows describes a number of functions carried out by English [illegible]

1. The hiring of professors in terms of a national taxonomy of jobs;
2. The building of the department unit around freshmen courses, majors, and a literature-and-writing emphasis;
3. The upgrading of the departmental "national reputation" in specific national reports through public relations arrangements;
4. The development of the department's balance between utilitarian and "high culture" studies, between required and optional studies;
5. The sustaining of the department's gatekeeper functions and of its image as 'public servant'–yet independent of public claims–through its 'professionalization.'

What Ohmann does not describe is the extent to which these individual departmental actions depend on national structures and legitimizing documents created by the professional society in the humanities:

A. The job description which Ohmann cites was published in the Association of Departments of English publication, *Vacancies in College and*

University Departments. The Association of Departments of English is a sub-agency of the Modern Language Association. The category "Renaissance" is a category legitimized by the presence of "Renaissance" sections at the MLA annual meeting and by MLA sponsorship of special "Renaissance" publications and bibliographies. Indeed, the present structural arrangements in MLA make it natural that a young person should assume that she/he will do research in a "literary period" such as "the Renaissance," find a job teaching courses in a period such as "the Renaissance," and read papers and publish to make his reputation in such an "area." MLA job descriptions, as formerly communicated through the MLA "slave market" at the annual meeting, commonly carried such a tag as "Renaissance," "Medieval," or whatever–together with a degree requirement. Whether such job descriptions are adequate to EEOC guidelines is dubious (cf. Study Commission newsletter on legal issues).

B. *Again,* the department-building procedure described as taking place at Florida Technological University involves the hiring of Ph.D's generally trained according to rubrics promulgated by the Modern Language Association. The planning of a "Freshman English" course, a major etc.–all of these are notions advanced in professional society offered publications and given consensual support in the profession. This is not to say that such ideas are not given further support in industrial and testing circles. It is to say that their legitimization starts within the profession itself.

C. In the matter of "national reputation": the Cartter and Roose-Anderson reports, adverted to in Ohmann's mention of a department chairman's interest in a public relations campaign to build up the department's reputation (p.267) were done on funding given to the American Council of Education by NSF, NIH, and OE. The Modern Language Association is a member of the ACE which did the report and has, through most of its history, been dominated by the departments rated "best" in the report. Of the methods of inquiry and validity of such reports, the Study Commission committee will speak in a forthcoming report by William Arrowsmith and Patrick Dolan.

D. The effort to balance utilitarian and high culture "concerns" has been a long term tradition in MLA as well as in the local departments. The "scholarly" part of the MLA annual meeting has always concentrated intensively on literature primarily, a bit on language, and not at all on composition. The political side of MLA has, on the other hand, concentrated on language and composition and the "humanities" conceived as lifting up society. There has not been much talk of direct federal subsidies for English literature, Romance literature, and Germanic literature, which are the mainstay of the society's annual meeting. The MLA has displayed an interest in a string of utilitarian bills—the 1958 "Foreign Language" title in the National Defense Education Act (which included training for school foreign language teachers to serve "national defense" ends), the 1964 extension of NDEA to English, the effort of the Council on the Humanities which developed the National Endowment for the Humanities, etc.

The MLA has had a long term interest in Freshman English, most recently developed through its Association of Department of English publications, through the Wilcox study, and through its two-year college position papers. It has displayed virtually no interest in linguistic colonialism and the birth of creolized languages or 'corrective norms.'

But the sustaining of the modern language professions' gatekeeper functions has not been done through activity of the Modern Language Association or NCTE alone—not recently at least—but through the pressures back and forth between the profession, business, the universities, and the testing agencies—all pressures requiring that "correct usage" be a major concern of the university English department. If the Modern Language Association has intervened at all in recent years in the gatekeeper business, it has intervened by not intervening—by not attacking tests in English such as the SAT which are based on very narrowly ethnocentric usage norms—particularly in view of a body of linguistics scholarship which suggests that such usage norms have no "objective" source in language or language scholarship but only in the preferred styles of specific culture groups. That the MLA may wish to work yet harder in the future on "correctness" in composition is suggested by a recent interview with William Schaeffer, the executive secretary of MLA, published in the *Chronicle of Higher Education*. Schaeffer indicates, "My impression is that on a national level we have failed—have continued to fail—to meet the challenge of illiteracy among college level students." An MLA study done by the Association of Departments of English seems to support Schaeffer. The hue and cry against "declining composition standards" is understandable. Jobs are hard for English and foreign language Ph.D's to find. But a market may be in process of being created in a scholarly vacuum. The differentiation of culture specific language or writing from "bad" or "inchoate" writing or speaking has never been undertaken as a scholarly or normative task. Standardized tests are often used to determine what goes on in the students' writing development. As Bob Hogan suggests, "the tests are designed to measure competence and avoid 'social promotion' . . . but they rarely measure writing ability . . . [O]nce standardized tests are adopted, they determine what will be taught in the schools." Because writing is the bread-and-butter teaching job of the humanities professions, few people will attack normative devices and prescriptive usage tests that protect the national sense that there is an intense national need to teach writing instead of an intense need for teaching people to understand *other* people's differentiated forms of writing or talk. The 1960's curriculum reform developed by MLA and NCTE through *The National Interest and the Teaching of English* advocated a non-ethnocentric stance with respect to language (nobody much got a job from making people 'speak right'). It also advocated fairly prescriptive norms for composition.

The MLA document, or MLA-influenced documents described above (and mentioned in the essay which follows), are the mythos-making devices which are constitutive of the individual departments in the parishes. The MLA is no villain. Professional societies in other areas have similar documents. MLA is no worse than its peer organizations (even Ohmann says "better the MLA than the FBI"). The chief harm of such documents as Ohmann cites may not be as Ohmann suggests, that they develop elitist attitudes and separate the humanist from oppressed humanity. Another harm may be that they create national dreams of excellence in the humanities which are severed from what goes on in the marketplace–from the dreams, failures, entertainments and expressive-political activities of people as they go about their day-to-day jobs. Thus, the professional society may have discouraged humanistic scholars inadvertantly from humanizing their own provinces. The making one's own province a decent place to live may be the humanist's chief task. Willa Cather's professor describes, in "Tom Outland's Story," what the discipline of civility is:

> I see your tribe as a provident, rather thoughtful people, who made their livelihood secure by raising crops and fowl–the great number of turkey bones and feathers are evidence that they had domesticated the wild turkey. With grain in their store-rooms, and mountain sheep and deer for their quarry, they rose gradually from the condition of savagery. With the proper

> variation of meat and vegetable diet, they developed physically. . . . They had looms and mills, and experimented with dyes. At the same time, they possibly declined in the arts of war, in brute strength and ferocity.
>
> I see them here, isolated, cut off from other tribes, working out their destiny, making their mesa more and more worthy to be a home for man, purifying life by religious ceremonies and observances, caring respectfully for their dead, protecting the children, doubtless entertaining some feelings of affection and sentiment for this stronghold where they were at once so safe and so comfortable, where they had practically overcome the worst hardships that primitive man had to fear. They were, perhaps, too far advanced for their time and environment.
>
> They were probably wiped out, utterly exterminated, by some . . . tribe without culture or domestic virtues, some horde that fell upon them in their summer camp and destroyed them for their hides and clothing and weapons, or from mere love of slaughter. . . .
>
> . . . .
>
> Like you, I feel a reverence for this place. Wherever humanity has made that hardest of all starts and lifted itself out of mere brutality, is a sacred spot. Your people were cut off here without the influence of example or emulation, with no incentive but some natural yearning for order and security. They built themselves into this mesa and humanized it.
>
> *(The Professor's House)*

In any case, the Richard Ohmann essay which follows is a brilliant picture of the power of the profession and of professional societies over the department. This power does not have much to do with working people who "build themselves into the mesa and humanize it."

Supplementary Essay VI

English Departments and the Professional Ethos

By Richard Ohmann

Shaw said that all professions are conspiracies against the laity. So it is in our profession, the college teaching of English, and English departments are the conspirators' cell groups. The argument of this essay will support Shaw's aphorism, but will have to sacrifice its neatness: for in academic fields—and perhaps in all professions—the conspirators think of themselves as working overtime to serve the laity. It seems to be characteristic of professions that they conceive their own advantage to be in the public interest. No professional would put it so crudely as Charles Wilson did when he said, "What's good for General Motors is good for the country," but the sentiment behind academic ideology is the same. I'll try to account for much that is familiar yet puzzling about departments by seeing them as instruments of our professional aspirations, engaged simultaneously in service to and conspiracy against the laity.

Not everyone will agree with me that the ways of departments are peculiar, that there is anything to explain about departments in general. So I will start with three perfectly typical instances of how departments bend our thought and practice away from what a naive observer would expect, and perhaps away from what most people who teach English want. The first is a listing in the Association of Departments of English publication, *Vacancies in College and University Departments of English for Fall 1971:*

> MISSOURI SOUTHERN COLLEGE, Joplin, Missouri 64801. Rank open, Ph.D. or A.B.D., Renaissance, salary open. College and Public School experience desired. 12-15 hours per semester: Freshman Composition, World and English literature. Possible summer work, 20% annual salary. Missouri retirement, health and medical insurance. College is a new and growing four-year institution, department of 22. Harold Cooper, Chm., Arts and Sciences Division.

This ad was doubtless the bridge between studenthood and an independent career for some young person; it is a signpost along the way in the most critical rite of passage of a working life. And at just that point it asks the graduate student to present himself or herself, not just as a college teacher, nor even as just an English teacher, but as a Renaissance scholar. Naturally the student's graduate training has strongly supported this self-definition.

Yet to me it is not at all obvious whose interest the arrangement serves, though everyone takes it for granted. Most students choose graduate work in our field because they like literature and writing, and think that they would like to teach those things to college students. I know few whose design was to be scholars, and almost no one who intended to be something so specific as a Renaissance scholar. It is even less likely that the people of Missouri or the students of Missouri Southern College feel a need to have this field covered at Joplin. As for the planners of this "new and growing" college, the English literary Renaissance can hardly have figured in their vision, but evidently departments did, and this ad is one entailment of building a college around departments. Does the department itself need a Renaissance specialist? It is not even clear that the winner of this position was to teach a Renaissance course. Most likely, in the minds of its twenty-two members, the new department at Missouri Southern College must look like other departments. This exigency is independent of anybody's need for a particular job of teaching, yet it governs the definition of the teacher, and the way our institutions shape our work. Why?

The second instance: in an article called "Building an English Department in a new University,"[1] Homer C. Combs describes his task at Florida Technical University in Orlando, founded in 1968. He sees his "challenge" as to attract colleagues who want to be "part of a new, vital effort," and recommends that "cautious young men and women, trustful of tradition," not interest themselves.

The architectural choices that Combs in fact made were principally these: (1) to hire young assistant professors with Ph.D.'s, rather than established scholars, in the expectation that "by the time the university is ready for established professors to teach graduate courses, some of the present group should have progressed to the same ranks, with their own claim to scholarly fame"; (2) to devise a freshman course that involves students in both reading and writing; (3) to "offer both a literary emphasis and a writing emphasis in the English major." Each choice is embedded in a network of decisions that were *not* choices, that were not even consciously made, so far as we can tell, by the planners of Florida Technical University, or by Professor Combs: to arrange the curriculum in courses, to have a freshman English program, to organize undergraduates' study of language and literature around a "major" in English, to offer graduate work after a time, to build a teaching force of scholars with established reputations. What necessity forbids making these things matters of choice, in this challenging situation? The decision, apparently, to provide the university with an English department.

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[1] *ADE Bulletin (Bulletin of the Association of Departments of English)*, No. 21 (May, 1969), 29-31; all my references are to issues of the late 1960's and early 1970's, and I shall omit dates from now on.

My first two examples indicate the control that departmental thinking exercises over the making of new faculty members and new universities. My third instance suggests that this habit of mind is as compelling among teachers and at institutions that are solidly established. I quote from the snyoptic minutes of a meeting of the Executive Committee of a major midwestern English department:[2]

> [The chairman] expressed his distress at the ranking of the . . . English Department in the ACE Report. He believes it represents a sad decline. The corollary is that we must scrutinize scholarly production with continuing vigor and perhaps try to achieve at least a limited infusion of distinguished senior staff. . . . In the discussion which followed, it was suggested that the whole Department might be involved more fully in attracting luminaries. [X] felt that we shouldn't misinterpret the rankings, since there is a time lag involved and we have had many retirements at the same time. He believes that in fact the amount and quality of publication is increasing. [Y] . . . believes we must generate things inside the University to bring attention to our activities. [Z], following up this idea, suggested we might have conferences, attracting

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[2] A rambling note about sources, with one curious turn. In preparing to write this essay, I wrote to friends and acquaintances at twenty-five or so colleges and universities, asking if they could send samplings of departmental memos, minutes, internal newsletters, and the like. Many obliged, and I owe them thanks, which I will not repeat individually, for documents that I shall quote from time to time here. In my letter I said I would feel free to quote from materials sent, and asked that my correspondents not send anything confidential or sensitive. Perhaps the midwestern chairman who sent me the minutes here excerpted did not notice that caution. Be that as it may, when it happened that I delivered part of this essay as a talk at his university, he expressed dismay at the violation of decorum I had committed in naming his institution and some of his colleagues. In deference to his wishes and those of another member of that department whom I consulted, I have omitted proper names and identifying clues from this excerpt. My purpose is not to embarrass friends and colleagues, and indeed it will be apparent that my analysis is critical, not of the department involved, but of the professionally created anxieties that made the department react as it did–and that made the chairman ask for secrecy, later. This aftermath makes the example even more illustrative of my thesis.

> prominent speakers. . . . [The ch[illegible]man] then suggested that he, [Z], and [W] might serve as a subcommittee to receive suggestions of this kind.

Ordinary and perhaps justified concern, yet astonishing in its way. This English department has been one of the most prominent in the country since before 1900. It draws good graduate students and places them well (though the present job crisis has doubtless had an impact). A job there is a plum. There are a dozen or more department members whose reputations I know, though they are not in my "field." This is a healthy department by marketplace standards. More to my point, the concerned department members do not suggest that their effectiveness in teaching or research has diminished, or that they feel any local need for more "luminaries" among their number. Apparently the department's work is going forward well. The "sad decline" has occurred, not in the department or its undertakings, but in highly subjective perceptions of the department's reputation by those polled in the Cartter Report, most of whom can know little or nothing directly of the department's quality. Yet this largely or entirely mythical decline stirred the department to action. A committee is formed; senior appointments are being sought. The department is mobilized as if its honesty had been impugned, or its budget halved, or like a restaurant demoted by the *Guide Michelin.*

Departmental thinking tugs hard on most of what faculty do as workers, shaping the plots we call careers, providing myths of prestige, determining the forms in which we teach. It is significant that the Cartter Report, the principal comparative index of institutional quality among universities, takes departments as the units for rating: they are at the center of our self-image, and of the value we set on our professional selves. In many ways, departments and the departmental ideal have power that extends beyond, and is greater than, that of the colleges and universities to which departments are formally subordinate. And as Jencks and Riesman note, "large numbers of Ph.D.'s now regard themselves almost as independent professionals like doctors or lawyers, responsible primarily to themselves and their colleagues rather than their employers, and committed to the advancement of knowledge rather than of any particular institution."[3] This shift in the locus of power from the managers of universities to faculty members and departments is at the heart of the "academic revolution" Jencks and Riesman describe.

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[3] Christopher Jencks and David Riesman, *The Academic Revolution* (Garden City, New York, 1968), p. 14.

I.

When Thomas Wilcox did his survey of undergraduate programs in English, now published as *The Anatomy of College English,*[4] there were 21,000 full-time teachers of English in four-year institutions. English was the largest department at two-thirds of these colleges and universities. How were and are they constituted, these curious institutions in which we work? I shall sift out three characteristics pertinent to my theme.

First, a department is a *hierarchical* group, arrayed in the usual ranks at 98 percent of the institutions (Wilcox, pp. 4-5). Below the bottom rank are teaching assistants and other part-timers. Above all ranks, in a sense, is the chairman. He is elected by his colleagues at only 7.5 percent of institutions (Wilcox, p. 40); generally his authority comes from outside the department. His formal power over colleagues is great, especially in the critical matter of promotion and tenure: in 43 percent of departments the chairman alone recommends advancement; in another 22 percent the chairman and his advisory committee are the department's agency (Wilcox, p. 22). Elsewhere, the senior members promote or fire the junior. In virtually no departments is promotion decided by vote of all members.

Yet surely this is a funny kind of hierarchy. Orders do not move down along its conduits, as in a military line of command or even a corporation. The assistant professor does not report to an associate professor, or give daily assignments to the instructors below him. On the contrary, most departments try to avoid a strong sense of subordination within the regular ranks, and even to suppress the relations of hierarchy in daily tasks. Titles are rarely used on office doors or in the departmental office; colleagues call one another by first names. The more self-confident the department, the more value it is likely to set on independence and full collegial status for members in the lower ranks.

But if rank is not power, it *is* status. Thus the great exception to the egalitarianism of departments is the matter of personnel decisions, before which junior members quietly leave the room. In promotion, reappointment, severence, and the award of tenure a department readjusts its internal relations of status of the department itself. (In the call for letters from outside referees, and in the questions "Is this the best person we can get in Milton?" and "Would you give him tenure at your university?" is an implied measuring of the home department against others, and against the best position it can aspire to in national rankings.) Hence the exquisite care departments invest in these decisions–probably more at most places than in decisions about the curriculum itself. This is to say that departments are the determiners of professional success, the arbiters of careers.[5] A professional career differs from a nonprofessional one precisely in that the professional moves upward in distinction–but not from a state of subordination to one of command. He is in theory independent from the moment he passes through his final initiation rite.

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[4] (San Francisco, 1973). I refer to this version when possible. But Wilcox kindly supplied me with his manuscript of the book before publication, and in a few instances I use statistics from that version which were omitted from the published book. The unpublished version was an HEW report, "A Comprehensive Survey of Undergraduate Programs in English in the United States," 14 May 1970. Even then, of course, some of the statistics and conclusions were out of date; the more so now. But for convenience I refer to Wilcox' findings in the present tense—hoping that our present may be allowed to encompass eight years.

Power, as opposed to status, does of course exist in departments, and power not distributed among equals resides mainly in the chairman and his executive aids. Wilcox notes that the job of running the shop is increasingly delegated to a chairman conceived as administrator, and that at many universities the chairman needn't be a scholar-teacher, *primus inter pares* (pp. 42-43). The pages of the *ADE Bulletin* are full of injunctions by deans and other administrators that, as Bruce Harkness puts it, "The day of the happy amateur is over" (No. 19, p. 13), that the chairman needs to be a sophisticated manager, that he should have a professional administrative assistant, that he can exercise great influence over programs if he learns how to identify the sources of power in a quasi-democratic setting.

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[5] Departmental newsletters are revealing; they chronicle the extramural doings of faculty as much as internal affairs. The newsletter of the University of Massachusetts (Amherst) Department, December 1970, includes much amiable chat, but also two single-spaced typed pages of the recent publications of members. The Michigan newsletter for Spring 1969 discounts its boasts with mild irony, but boasts nonetheless: "John Styan has become a force in the drama, Literary and theatrical, on both sides of the Atlantic, with four books already out and one emerging." "Restoration and Eighteenth Century is kept alive by Allison. . . ." "Our most distinguished missionary to the fallen world beyond Ann Arbor recently has been Robert Super, who read three lectures at Northwestern. . . ." Louis T. Milic, chairman at Cleveland State, writes that "*Prestige* literally is an illusion," but resignedly agrees that "a new university must build a reputation." And the newsletter (*The Unicorn*, March 1972) in which his reflections appear includes the usual career notes–"William Cherubini was a discussant of one of the papers at the Midwest MLA meeting. . . ." "Harold Dailey delivered a paper on . . . before the first general session of the Annual Conference of the Research Society for Victorian Periodicals at the University of Illinois, Urbana." And so forth. As I read them, these periodicals mainly reassure department members and graduates that their affiliation with the home place is honorable.

We can reasonably see the chairman as interface between the bureaucratic world of contingency, which is the university at large, and the monastic world in which individual teachers aspire to dwell. "The departmental executive officer . . . finds himself caught between this new world of hard-driving management and the old world of administration by personal conversation. The administration insists that he and his department conform to established management routine; his colleagues stridently scoff at such routines and do the best they can to undermine them" (John Gerber, Chairman, Iowa, *ADE Bulletin*, No. 15, p. 4). Precisely: the chairman's power comes from the multiversity in which departments find themselves, and is necessary because decisions have to pass back and forth between a managerial setting and a professional setting. Robert Rogers suggests that "the best departments . . . nearly all have five- or ten-year plans of development . . . in which existing strengths are inventoried, goals are set forth, and specific requirements for systematic, orderly growth are detailed" (No. 15, p. 17). Planning is the characteristic activity of the technostructure, Galbriath argues. Universities need planning, in the new industrial state, no less than do corporations or governments. So the department chairman is at the farthest outpost of "progress." He is the remotest arm of the central administration, and the professors consent to his having managerial power in exchange for his protecting their own very different ecology. The distribution of power in departments, in short, is such as to nurture faculty members' ideas of themselves as professionals.

The second point I would like to make about departments concerns the extraordinary place that recruiting holds among their activities. Gerber says that staffing "may be our greatest satisfaction in the job" of chairing (*ADE Bulletin*, No. 15, p. 8); Robert B. Heilman (University of Washington) says that for him "appointments are the most interesting of all tasks" (No. 19, p. 9); and Harkness, speaking as dean, advises that the main job of a chairman is that of recruiting faculty members: "Choosing faculty is the one thing in which a chairman must not fail" (No. 19, p. 15). This emphasis seems natural, I submit, only because we rarely think about it. No department head in a government agency or corporation would consider replenishment of the ranks to be his supreme task, or the measure of his success. After all, there is work to be done. An academic department's work is teaching, mainly. No doubt good recruiting does lead to good departmental teaching, but that's not the way chairmen and deans talk about it: they speak of the "strength" of the department in the different areas, its "balance," its general "quality." They regard making a new appointment as fitting a piece into a puzzle, which, if properly completed, would be the image of a distinguished department.

How in fact do departments carry out their extraordinary powers of appointment? Unsurprisingly, Wilcox identifies such practices as these: (1) hiring is generally done by special field (remember the vacancy at Missouri Southern College); at 32 percent of the colleges and universities, the English department looks *only* for specialists, and this figure is 48.6 percent in departments with graduate programs, 50.6 percent in large institutions;[6] (2) departments in large universities are much more likely to hire at the top–40 percent did so between 1964 and 1967;[7] these lustrous appointments are the main indicators of which achievements count in the profession, which ones lead to upward mobility and fame; (3) while teaching ranks first or second among stated criteria for advancement in 86 percent of the institutions, and scholarship in only 35 percent,[8] those departments concerned with reputation value scholarship more highly, so that success is defined for everyone by publication and the notice that accompanies it. In brief, this whole system lends support to the values that faculty have made preeminent in American higher education: specialization, research, visibility among peers, loyalty to the guild rather than to the college or university. The highest emotion and interest fix on the transactions that cement or alter our hierarchies of merit. Too: admission and accreditation are critical acts in any profession. In the control it exercises over entry and advancement the department shows itself the main seat of our professionalism.

My third set of anomalies in departmental conduct has to do with curriculum. Since they are familar enough, I'll be brief. As universities have given over the selection of faculty to departments, so have they consigned their right to plan the very nature of instruction. By far the largest amount of instruction goes on in courses and programs that are under departmental authority. And departments lead in initiating and abolishing courses. So it is hardly an exaggeration to say that when a student looks at the array of educational possibilities before her, she is looking at the invention of departments. What have English departments done with this considerable freedom?

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[6] Wilcox, p. 14, for the first of these figures; for the other two, see the unpublished HEW report, p. 17.

[7] Wilcox omits this figure from the published book; it is in the HEW report, p. 19.

[8] HEW report, p. 36.

Freshman English is a fixture, of course, even though its importance has recently been reduced. Beyond freshman English, Wilcox found that the survey of English literature was still the base of the department's own program—required of majors in 47 percent of the colleges and advised in another 12 percent.[9] The survey is gateway to the major, and virtually all four-year institutions offer a major in English. Why? It may not be a bad way to organize some students' time, but is it the sole right way, as its universality implies? Only once among the departmental plans, curricular proposals, and critiques of our field that I've read have I run into the thought that departments might do better without the major (Kenneth Eble, "A Newer English," *ADE Bulletin*, No. 27, p. 17). Yet as a program—an integrated sequence of educational events—the major is in disarray. Wilcox reports that it is amorphous, without evident principles to justify its substance or order (pp. 137-38). Apparently the concept "English major" is a necessary but empty one. We would not feel comfortable without such a program in the catalogue, but what it comprises is up for negotiation at each college. I submit that this happens for two reasons. First, the tacit principle behind our model for it is the Ph.D. curriculum. But that sort of "coverage" is impossible to cram into a liberal arts major, hence the various compromises. Second, since comprehensiveness is out of reach, undergraduate departments realize the professional ideal not through their whole programs, but through individual courses, among which the major steers her way. The chief way of organizing our field for undergraduates is still periodization, which preserves the separate units of a Ph.D. experience even though the gestalt is unachievable. A hodgepodge of other academic specialties (drama, Faulkner, history of the language) make up the rest of the curriculum. The English department, given its head, plans curriculum by filling the catalogue with courses matching professionally designated special fields.

II

In this skeptical frame of mind it is interesting to examine what some of the elite departments say they are doing. From time to time *New Literary*

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[9] Wilcox, p. 138; but see the original HEW report, p. 162, for the exact figures.

History prints under the general title "Literary History in the University" statements about curriculum.[10] These differ a great deal from one another. The point of reference for Yale University is right interpretation of major works, for Johns Hopkins intellectual trends within the field, for the University of California at Berkeley the contexts of literature, and so on. The curricula, too, are varied. Yet they stand on a common foundation. The range of issues that trouble departments is roughly this:

(1) How can literary history fit into our professional life? How can we place it in the curriculum? In scholarship?

(2) What shall be the legitimate fields and modes of study? The challenge of New Criticism to literary history is the backdrop of this question. Every statement—and I gather every curriculum—tries to strike a balance between interpretation of individual works and a historical consciousness. The attempt at reconciliation serves also to justify the presence in a department of both kinds of courses, and to make professional room for different modes of scholarship by the faculty. The statements from the University of California at Berkeley, the University of California at Irvine, and The Johns Hopkins University list books by department members to illustrate variety. All the departments claim to be pluralistic. They hold the umbrella of professional legitimacy over as many subfields as possible.

(3) How do faculty work out their diverse interests together? At Hopkins, in internal dialectic (in Humanities Seminars, History of Ideas Club, and so forth); at the University of Wisconsin, by dividing the curriculum into areas of specialization with which faculty and students can "identify," and so gain some sense of "community."

(4) What does the field as a whole "need"? Adams says there is a need for literary theory, which motivates the Irvine program. Jordan says that we "need to re-create the past," as a means of doing justice to literature in the present. In most discussions the field is conceived as an organism with its own metabolism, diseases, needs for ailment and therapy.

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[10] I refer to the ones about Yale University (Martin Price, Winter 1970), The Johns Hopkins University (Ronald Paulson, Spring 1970), the University of California at Berkeley (John E. Jordan, Spring 1971), the University of California at Irvine (Hazard Adams, Fall 1972), the University of Wisconsin (Charles T. Scott, Spring 1973), and Stanford University (Bliss Carnochan, Winter 1973).

The priority of professional issues like these seems to me to explain a certain thinness in most of the statements. The Wisconsin one is almost wholly preoccupied with the right time and way for graduate students to specialize in a chronological field, and with the balance between such concentration and coverage of all fields. At Berkeley the issue is drawn between those (who are they?) who want to study works "in isolation," and those (most of the department) who think that "the individual work must . . . be seen in its context, of which literary history is a part." Irvine, with the advantage of starting fresh, takes as its major premises that English shall work closely with Comparative Literature and Creative Writing, and the department will be concerned with theory, and its relation to critical practice. Irvine, like the rest, assumes departments (Foreign Languages and Literatures broke up into the usual fields as soon as growth permitted), special fields, courses. Only in Yale's statement does one get the tension of debate about where truth might abide among the various schools and subfields, about how history and art really are.

Doubtless such a debate is outside the limits of what these chairmen and spokesmen thought themselves invited to prepare. Still, *sub specie alternitatis* their statements seem remarkable for the tacit limits that enclose them. The subject is academic program, but students hardly figure in the rationale offered by teachers, except (e.g., with Berkeley and Wisconsin) as a body of opinion and a market–fluctuating–for courses. About students' existential needs and about the relationship of their education to the work they are preparing to do there is surprisingly little. There is virtually nothing about society outside the academy, about how departments conceive *its* needs, about the effect they hope to have on it through their scholarship or their students. Aside from the piety of a few references to great scholars of earlier generations, there is no sense of a past, particularly an institutional past. The departments relate their work to literature and the history of ideas, sprung loose from the more mundane history of American universities–and freshman composition–on which all literary history in this country is in a sense parasitic. And except for Yale, there is little attempt to found curricular choices in a struggle toward truths about literature and history. It is to be *natural* that the chairmen would have conceived their accounts thus; I mean simply to point to the strangeness of what "natural" has come to mean for us and our profession.

One can imagine goals for literary education that are at least worth considering, and different from these: to educate students as critics of our verbal culture; to give them an understanding of the fictions (in Kermode's or Frye's sense) that we tell one another and that give direction to our politics, our work, and all our acts; to nourish self-understanding and self-realization as literature supposedly can do. The elite graduate departments are not of course deaf to such considerations. But when they lay out their goals and methods in a professional setting they stay on safer ground. And these are the designers of our profession's self-image.

Given this conservatism at the center, it is instructive to note how the undergraduate English offering has responded during the years since Wilcox' survey: years of the most insistent pressure for change from minority groups, from students impatient with purely professional training, from the new groups admitted to our rapidly expanding university system, from disaffected faculty. An informal survey by John Kinnaird[11] shows that departments have allowed a proliferation of new studies and approaches, new "relevant" contents and styles–yet without yielding any ground near the professional heart of the curriculum. In all but a few of the seventy-one institutions he surveyed, Kinnaird found the standard requirements for the English *major* more or less intact. Only nine departments had open majors; and a few traditional courses had been eliminated. Yet the departments had added dozens of new courses: black literature, ethnic literature, film, female studies, science fiction, psychoanalysis and literature, the literature of adolescence, satanism, the city, and so on. In short, the opportunity for English departments to reconceive their task–and so perhaps reshape literary culture–has been bypassed in favor of a set of conveniences that preserve *both* the professional habits of lifetimes and the popularity of the department's offerings. The force that makes English departments so timid in the exercise of their curricular power is, I think, less a WASP ethnocentrism (look at our courses in black literature) than a professional one.

III

In these three areas then–internal distribution of power and status, control of staffing, educational planning–English departments act to enhance the professional image of their members. I have tried to show that this kind of professionalism makes departments more conservative than they might be in using the considerable powers that they possess. They serve the discipline and its traditions, and respond to social change only within that framework.

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[11] "What's Happening to the English Curriculum: A Survey and Some Reflections," *College English*, 34 (1973), 755-72.

In a pinch they will preserve what is familiar, while adding the new as necessary, in convenient packages.

Naturally this *modus operandi* has led to tensions in the last few years, as professional habits have been challenged by financial cutbacks, the job crisis, criticism from students. There are jeremiads and warnings. But the more general attitude persists that when society devalues our services it exhibits a temporary aberration. "If a department is meeting its obligations to the students and to the profession, it will simultaneously be meeting the major part of its obligation to society" (John Gerber, "The Chairman and His Department," *ADE Bulletin,* No. 15, p. 6). What's good for General Motors. . . . To press the identity of one's own interests with those of the larger society is the normal task of ideology, and we teachers of literature have our own ideology.

Behind justifications of our acts which appeal to universal welfare, it's often not hard to see the welfare of the English professor. "We can demand scholarship [of English teachers] because scholarship needs to be done. . . . Every great author needs reinterpreting for every age. Every age produces new eminent writers who need interpretation. Our own age has produced, and is producing, new insights from other disciplines which need to be applied to literature" (Jacob Adler, "The System and Its Consequences," *ADE Bulletin,* No. 18, p. 19). Do the great authors need reinterpreting, or do *we* need to reinterpret them? *Who* is it that needs application to literature of insights from other disciplines? Adler's rhetoric, common enough, is that of presenting local interests as categorical imperatives. The verb "need" is the equivocator in this excerpt. Its parallel can be found in many such passages. Often needs are abstracted from the professors and put as immutable givens, or as needs of "the department" or "the college." The Director of the Office for Research Contracts at Harvard asked the Harvard English Department to help him define the needs of such an organization. Doubtless to everyone's amazement, he was able with their help to identify these needs: additional funds for faculty salaries, additional faculty, additional secretarial assistance, more office space, more funds for graduate students, more funds for visiting professors and sabbaticals, and funds for publications of books—"which although valuable may not have a wide commercial appeal" (Robert E. Gentry, "Planning, Submitting and Administering Grants and Contracts," *ADE Bulletin,* No. 19, pp. 29-30). It is easy to imagine what gains there would be for Harvard and for the general culture were the needs of this indigent department to be met. As Heilman says well, though with a cynical inflection scarcely to my taste, "too often . . . loyalty is not even to the profession but simply to the professor himself, and such a loyalist tends to regard improvement in the institution as an automatic by-product of privileges for himself" ("The Ghost on the Ramparts," *ADE Bulletin,* No. 19, p. 6).

Faculty try to look out for their immediate interests, like every other group. Departments work to advance faculty interests. Our myths of cultural need and the general welfare are the song to this dance. That there should be such myths for teachers or any other group is quite normal, as I have tried to insist. But in the content of the myths, and in their relationship to what the groups actually do for society, there is room for variation. The professional ideology of English teachers puts emphasis on the transmission of high culture and on the generation of new knowledge. Why should this be so, when surely we spend, as a group, a tiny proportion of our time in scholarship, and only a relatively small proportion teaching on the higher slopes of culture? What we do most is teach–and mostly lower level undergraduate courses. It needs explanation that English teachers don't claim more credit for the part of our work that society values, and less for the part that society hardly knows of, and would probably disapprove if it knew more.

I think that the explanation is not far to seek. Much of what we do with society's full sanction is work demeaning to professional egos, or even morally dubious. Freshman composition, responsible according to William Riley Parker for the very existence of English departments, is certainly the subject for which most of our colleagues in other departments and (so far as they care) the general public hold us primarily accountable. It occupies 40 percent of our teaching time (Wilcox, p. 63). Yet the kind of acculturation practiced in it, with red pencil and *Harbrace Handbook*, is not the kind Matthew Arnold or the professional ideologues have envisioned.

The bulk of our teaching time beyond freshman English goes to the major program. Who takes it? One of Wilcox' most intriguing statistics is that more than two-thirds of the English majors (68.5 percent) are women (p. 129). It seems likely that the imbalance owes, not to any "effeminacy" of literary culture, but to two basic socio-economic facts: that the main job for which a major in English specifically prepares one is teaching English in secondary school, and that this work–less prestigious and worse paid than most jobs for college graduates–is still mainly relegated to women. High school English teachers perform the acculturation one stage earlier which we attempt again in freshman English. From society's point of view this is the main work that we do. ("Oh, you teach English? I'd better watch my grammar.")

We train young people and those who train young people, in the skills required by a society most of whose work is done on paper and through talk, not by physical labor. We also discipline the young to do assignments (on time), to follow instructions, to turn out uniform products, to observe the etiquette of verbal communication. And in so doing, we track out the less adapted, the ill-trained, the city youth with bad verbal manners, blacks with the wrong dialect, Latinos with the wrong language, and the rebellious of all shapes and sizes, thus helping to confirm social and economic inequalities. Most of these are unwilled consequences, and since they also mock the egalitarian ideology of the larger culture, it is not surprising that the English department fails to point them out when justifying its pay.

Yet in some crannies of our leaders' public pronouncements it *is* possible to spot attitudes that nourish the English department's work as sorter-out of elites and domesticator of the rest. Part of the background for professional conversation is the familiar hierarchy of institutions. Harvard, always, is the example of undoubted quality: "If an applicant presents a *summa* degree from Harvard, shall we say, it is unlikely that anybody will ask for supporting evidence. If, on the other hand, he presents straight A's from Slippery Rock . . ." (Bradford A. Booth, *ADE Bulletin,* No. 20, p. 19). More often than Slippery Rock, we're given fictitious examples of the boondocks—"Podunk State," and so forth. Harvard, of course, itself shares the implied values: "There may be a place for such a minimal concept of preparation, a teaching Ph.D., but it is not Harvard."[12]

Chairmen also turn up on the side of regularity and social norms, by and large. This appears in much value-free wisdom about crisis management. English departments are "the attractive homes of both reformers and revolutionaries": "That is why you chairmen will spend so many of your waking hours talking to students about every facet of your job and every one of their grievances and demands . . . you will listen patiently to reckless accusations and unfounded charges. . . . You will be agreeable, I dare say, to putting students on some, perhaps most, of your departmental committees. . . . Grim though the prospect is, you may also be subjected to intense pressure to reveal your salary schedules and recommendations" (Gwin Kolb, "The Crisis in the Profession," *ADE Bulletin,* No. 22, pp. 9-10). The chairmen are assumed to be neither for nor against the "reformers and revolutionaries," but only for what Kolb calls "the tranquility of your schools." As a former associate provost, chancellor, and whatnot, I know the feeling. Administrative neutrality is three-quarters the simple human urge to make it through to martini time.

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[12] Harvard English Department *Newsletter,* February, 1971, p. 2.

Departments can sometimes be observed passing on the discipline more directly, as in the University of Nevada at Reno handbook for teaching fellows in English (Fall 1970):

> You have been hired because the Department felt you capable of handling your teaching responsibilities. It is, however, no secret that teaching fellows . . . have been under fire from a number of places in recent months. For your own protection, the Director of Freshman English will visit your class at least once a semester. . . .
>
> These rules are minimal rules. . . . You deserve freedom in your classroom to teach effectively. We do urge you to remember, however, that you are not a one-man or one-woman university. . . . If you feel bold enough to put your own job on the line for some cause or issue, take time to remember that you may endanger others as well and temper your actions accordingly.
>
> Full membership in the profession is available to these novices only on payment of certain dues, as the tone more than the substance of the injunctions communicates.[13]

If such attitudes work nicely in support of the acculturation we are expected to supervise, however, they are by no means necessary to it. Let me reiterate that I do not accuse our profession of voluntarily turning the crank of society's machinery of repression. Some of us are repressively inclined, others not. The point is that institutionally we perform certain services at society's behest to earn a livelihood, but these are not the parts of our work that accord best with professional dignity, or with what we think society *ought* to want from us. Ideology tries to make reality match up with desire. And the ideology we use is the very widespread ethos of professionalism.

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[13] At the University of Texas at Austin, the director of freshman English (James Sledd, scarcely a conservative) has to include in a similar handbook the following warning: "The students' religious, moral, and social views must at all times be respected; but on one subject, the use of drugs, respect for their views must never in any circumstances become encouragement to commit a felony" ("Notes on Freshman English: Fall, 1970," p. 7).

IV

I am arguing that many peculiarities of departments, and of the way English teachers act through them, can best be understood as representing a clash between the professional claims of faculty and the externally imposed conditions of our working lives. The department is a faculty member's professional home, the locus of his career.[14] It acts as an extension of his professional superego. In pursuing this idea I have found it useful to step back from the details of English department life and see what shape professionalism takes as a more general social phenomenon.

For it is general. Everett C. Hughes, the most illuminating theorist of the professions that I've come across, describes the "librarians, insurance salesmen, nurses, public relations people, YMCA secretaries, probation officers, personnel men, vocational guidance directors, city managers, hospital administrators, and even public health physicians," among others, who take his seminars partly to be able to demonstrate that "some occupation – their own – has become or is on the verge of becoming a true profession."[15] Follow Hughes's discussion a bit farther. All these groups are trying to get to the same place, but their starting points differ:

> The insurance salesmen try to free themselves of the business label; they are not selling, they are giving people expert and objective diagnosis of their risks and advising them as to the best manner of protecting themselves. . . . The librarians seek to make themselves experts on the effects of reading, on bibliography and reference, rather than merely custodians and distributors of books. . . . The social workers earlier were at pains to prove that their work could not be done by amateurs, people who brought to their work naught but good will. The YMCA secretary wants

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[14] John Fisher says this well, in analyzing the obstacles to interdisciplinary programs, "Facing Up to the Problems of Going Interdisciplinary," *ADE Bulletin,* No. 32, p. 8.

[15] "Professions," *Daedalus,* 92 (Fall 1963), 658.

> his occupation recognized not merely as that of offering young men from the country a pleasant road to Protestant righteousness in the city, but as a more universal one of dealing with groups of young people. All that is learned of adolescence, of behavior in small groups, of the nature and organization of community life is considered the intellectual base of his work. (p. 659)

And so on. Would-be professionals try to convince the public (1) that they have something to offer that society vitally needs; (2) that they offer it in a way that is detached and objective–"having in a particular case no personal interest such as would influence one's action or advice" (p. 660); (3) that they "know better than their clients what ails them or their affiars" (p. 656); (4) that this expertise cannot be won by apprenticeship alone, rather, "the skills that characterize a profession flow from and are supported by a fund of knowledge that has been organized into a . . . *body of theory*";[16] and (5) that long training in a professional school is necessary to master that knowledge and those skills.

If the public will grant these premises, then it will have good reason, in sheer self-interest, to allow the professions some rather special benefits. One is independence from the marketplace. Professionals do not sell to customers, they perform services for clients. (Even if the professional draws a salary, he is *not* an "employee" or an organization man, but a free agent who happens to be "at" Indiana, not "working for" Indiana.) Second, they may charge for these services "in accord with the standards established by one's colleagues, even if the client receives no satisfaction or benefit" (Jencks and Riesman, p. 202). (When was the last time an English teacher had his pay docked because a student wrote no better at the end of the year than at the beginning?) In fact, the client can't judge whether he has or has not received fair value; the professional himself is the judge of what's good for his clients, and for society in general, in the area of his operation. As Hughes puts it, the motto of all professions is *credat emptor.* As a corollary of this faith and respect, the client tells the professional "all secrets which bear upon the affairs in hand" (Hughes, p. 657). The relation is a private and confidential one. The classroom, like the doctor's examining room and the confessional, is inviolable sanctuary. Further, as only professionals can judge what the client needs, they are also sole judges of what constitutes a qualified professional. (Jencks and Riesman define professionalism by the increasing concern for what practioners think, and declining concern for laymen's assessments.) They persuade the society to give them control over training, examining, and licensing of new recruits, and to enforce this exclusive right with police power (Greenwood, p. 211). In effect, they have a guaranteed monopoly in their area. Furthermore, as they can direct police power against "quacks" and "charlatans," they are themselves immune from prosecution for mistakes–except of course by their professional colleagues.

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[16] Ernest Greenwood, "Aspects of a Profession," *Man, Work, and Society,* ed. Sigmund Nosow and William H. Form (New York, 1962), p. 208.

As Hughes says in another context: "Many of the specific rules of the game of an occupation become comprehensible only when viewed as the almost instinctive attempts of a group of people to cushion themselves against the hazards of their careers."[17] In sum, a profession is in many ways the nearest approximation offered by bourgeois society to hereditary title and rank. Small wonder that undertakers prefer to be morticians, and teachers professors.

In addition to the claims the profession makes to be invaluable to society, and the benefits it asks in return, it also maintains some comforting myths for mainly internal use. I'll mention two. One is the idealized relation of professional to client, a relation, as Hughes sayd, "partly reality, partly stereotype, partly ideal nostalgically attributed to a better past or sought after in a better future." The commonest complaint of professionals is that someone–other workers or the public–interferes with the basic relation. "The teacher could teach better were it not for parents who fail in their duty or school boards who interfere" (*Men and Their Work*, p. 75). What bothers the professional most is "the differing conceptions of what the work really is or should be, of what mandate has been given by the public, of what it is possible to accomplish and by what means. . . ." (p. 76). This description must fit academic people better than almost any other professionals. Our lives are full of resentments against unsympathetic and uncomprehending legislators who think we have a nine-hour work week, against regents and trustees, against interfering alumni, against administrators who drown us in paper work and committees, against refractory buildings-and-grounds men, and, of course, above all against students, who have such difficulty seeing their educational deficiencies aright, and cooperating with us in the remedy.

The other central myth is that of the *career*. Greenwood points out that bricklayers and mechanics don't have careers, architects and clergymen do (see "Attributes of a Profession," pp. 215-16). A career implies, not just ascending in seniority, rank, and salary, but moving through recognizable stages, accomplishments, honors. A career is the projection of one's working life onto a value-laden grid—a kind of Uncle Wiggly board—of positions, credits, demerits. Behind this grid, the implied values are those of service to the profession and to "knowledge," not mainly self-interest. When a scholar moves from Associate at Ball State to Professor at Chicago he has, to be sure, improved his salary and work conditions, but the move is also registered by the whole profession, and (say) approved as a proper adjustment to merit, or condemned as a sign that the Chicago department is on a down slope. As I tried to show earlier in this essay, much of what goes on in and around English departments concerns status rather than concrete well-being, or improvement of one's work, and makes sense only in view of the central place that the concept of a career has for us.

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[17] *Men and Their Work* (Glencoe, Ill., 1958), p. 108.

And in general, this conspectus on professionalism seems to have explanatory use with reference to the anomalies I noted earlier. Departments, ideally, are enclaves within which peer judgment holds sway, and guides the delivery of our services to our clients. It is through departments' curricula that recruits are guided toward the gateway of the profession, and, in graduate programs, finally given credentials. Through staffing, departments further control entry to the guild, and determine how swiftly a new recruit negotiates the ladder of success—hence our preoccupation with personnel matters. Departments think of themselves as ultimately responsible to the discipline, or to "literature," not to the college or even to the students. Hence their orientation toward the graduate school ideal of the field, and toward the special subfields, though these are often distantly related to local need. Departments try to defend the professional claim that competence in teaching follows only from mastery of our particular body of knowledge. The job that society needs done, we say, cannot be performed by amateurs or journeymen. In fact, the job it needs is not even the job it thinks it needs, for the latter—disciplining young people in spirit and in verbal skills—could be done by schoolmasters (or even by machines?). Almost every characteristic of departmental behavior owes partly or entirely to the natural wish to secure professional privilege and status, by convincing society and ourselves that we deserve it.

One of the most poignant crises of recent years, that of overproduction of Ph.D.'s, can be directly attributed, not just to economic forces, but to two professional impulses, whose incompatibility became evident only with hard times. Since the professional school is the heart of professional life and the professional value system, and since graduate departments are our professional schools, we tend to define success as holding a post in a Ph.D.-granting department. Not everyone can fit into the Yale department, but during the 1950s and 1960s, with the great expansion of universities, faculty at many other universities and state colleges discovered that if they couldn't move to a professional school, they could start a professional school on home ground. But this expansiveness could last only so long as prosperity held off its collision with the other imperative: strictly limit entry to professional ranks and so preserve the benefits of monopoly. In the post-1968 panic many faculty in new Ph.D. programs have doubtless felt a decline in status. But the ramparts of the profession are pretty good security for those actually inside. Graduate professors voice consternation, but "excess" graduate students and junior faculty bear the economic privation.[18]

In the recent controversy over evaluation of teaching and of teachers, too, one can hear the deeper rumble of conflict between a professional ideal and society at large. Fittingly, the arena of this conflict has gotten the name "accountability," among high school teachers, and the concept increasingly applies in colleges as well. To whom and for what are English teachers accountable? A would-be profession tries to secure the right to establish its own answers, and regards the intrusion of other claimants as a threat. Most of the crises that drew the anxiety of chairmen over the past few years were, finally, challenges to professional autonomy: the demands of students for a voice in program and personnel decisions, the collective action of TA's and of faculty acting through unions, the application of "unprofessional" criteria to staffing (e.g., affirmative action plans for hiring of minorities and women). Most English faculty support the social goals implied by such demands, yet feel the demands as invasions of professional privacy.

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[18] The other main controversy surrounding the Ph.D. of late is also a byproduct of tensions in the struggle for professional status. Those favoring "teaching" degrees like the Doctor of Arts, the ABD, and the M.Phil. point out that the Ph.D. doesn't really train people for the teaching job society needs. These are compromisers, who hope to preserve our position by yielding to social pressure. Defenders of the Ph.D. hope to win a more complete victory in the battle of credentials. They argue that intermediate degrees would lower professional standards—that is, diminish our control over the definition of our work and of qualification for it.

V

We are feeling tensions now that developed quietly during the 1950s and 1960s, with the enormous growth in size, prosperity, and importance of universities, and that came noisily to the surface in the political awakening of the late 1960s and the economic crunch of the 1970s. But these tensions were implicit, I believe, at the very beginning, in the curious circumstances surrounding the early history of English departments.

This is a story that has been well told in two articles that I'd recommend to everyone in our field: William Riley Parker's "Where Do English Departments Come From?"[19] and Wallace Douglas' "Some Questions about the Teaching of Works of Literary Art."[20] Both note the amalgamation of partly contradictory tasks and interests that made up our field. Parker explains how American departments, the scholarly heirs of philology, eagerly acquired the remnants of rhetoric, too, and have since counted on these to secure our position in the university. Students "need" to be taught composition, and rather arbitrarily, scholars in literature are the ones thought professionally competent to teach writing. Douglas follows the equal-and-opposite reaction in this dynamic: given a place in the pantheon of departments, English had to look like a subject. That is, it required the esoteric body of knowledge that is part of the rationale for every profession. That body of knowledge, of course, was literary scholarship. Douglas shows that, given the scholarly rationale of the field, it was natural for faculty to want to *teach* literary scholarship as well as study it, and indeed, that this kind of teaching came to seem the most important, the most central, teaching that we do. Hence the familiar paradox that the part of our job which justifies us to others within and outside the university is the part we hold in lowest regard, and delegate to the least prestigious members of the profession.

It takes only a bit more context to show how congruent is my explanation of how departments behave now with the history that Parker and Douglas tell. They describe the maneuvers of language-and-literature faculty in trying to claim professional status, by joining the bread-and-butter work of teaching freshman English to the scholarly work of literary study. Composition supported scholarship, practically speaking, while scholarship enabled those whose trade was teaching composition to present themselves as professionals. What remains to see is how the opportunity arose. For needless to say, it didn't happen in isolation from other changes.

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[19] *College English*, 28 (1967), 339-51.

[20] *ADE Bulletin*, No. 25, pp. 31-45.

Everett Hughes, speaking of more recent candidates (than college teaching) for professional status, says that most of the jobs "are practised only in connection with an institution. Their story is thus that of the founding, proliferation or transformation of some category of institutions . . ." (*Men and Their Work*, p. 133). As long as there have been books there have been libraries, but the profession of librarian arose only with large libraries that circulated books as well as collected them. Nursing is ancient, but the profession only arose with the modern hospital. Comparably, the institution that combined the trade of schoolmaster and the gentlemanly avocation of literary scholarship into the profession of "English" was the modern university. American universities passed through a dramatic change in function between 1870 and 1900, their work becoming an essential part of the industrial state's productive system. They also passed through a dramatic change in *structure*, became different institutions. The changes included specialization of students and faculty, a rapid increase in fields of study, the beginning of graduate work and graduate schools, adoption of the research ethos, establishment of a complex administration, division of the university into professional schools and—of course—departments. These changes made it natural for teachers to become professionals. The history of the Indiana University English Department[21] helps show how this worked.

In 1860, when Rev. Henry Hibben became the first "Professor of English Literature," Indiana had ninety-nine students and eight regular faculty members. There were just two courses of instruction a student could pursue, a classical and a scientific; and though a third—modern languages—was added in 1877, it is fair to say that until after 1880 students pursued rigid and almost uniform programs, which embodied what the faculty thought to be universal attainments of culture. In the late 1870s Professor George Washington Noss's description of English studies stressed "writing, analysis of style, and . . . criticism." The latter was to show "the relation of Rhetoric to

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[21] "The Department of English, 1860-1893," by Frank Davidson, and "The Department of English, 1893-1920," by Donald J. Gray, unpublished typescript. Professor Gray kindly gave me copies of the two essays. (Since this article went to press the study has been printed, much enlarged, as *The Department of English at Indiana University 1868-1970* [Bloomington, n.d.].)

Logic, Aesthetics, and Psychology" (Davidson, p. 7). And when President Lemuel Moss made a plea for English study in 1878, he said that "to observe clearly, to think accurately, and to speak correctly and forcibly, in English, is the chief goal of all liberal training with us—the outward form of that disciplined mind and spirit which is the one great end of education everywhere" (p. 8). Cultivation of the young was the University's business, and the study of oratory, rhetoric, and literature was part of the orchestration for each student.

In 1884 David Starr Jordan became president of the University. Jordan, later president of Stanford, was one of the eight or ten men most instrumental in reconceiving the American university. Things changed fast under him. Orrin Benner Clark, who had been the Professor in English since 1880, went on leave for 1885-86, and during the year traveled in Europe as well as earning an M.A. at Harvard. Davidson speculates that Jordan may have suggested the leave, and the advanced degree. In any case, it is certain that Jordan pressured his faculty to pursue advanced training, and distinction in their fields. To one he offered a professorship in Greek if he would do special studies at Harvard and in Athens; he promised to hold a chair in mathematics for another if he would study in Europe; he made another one professor of philosophy after his return from the University of Berlin. Jordan also tried to bring to Indiana distinguished young men from elsewhere—notably Woodrow Wilson and Bliss Perry (Davidson, p. 14). Scholarly reputation and advanced degrees became important.

A change in attitude toward the curriculum accompanied these professional demands on the faculty. According to the 1891-92 catalogue:

> During the administration of President D.S. Jordan (1884-91), a radical change was made in the methods of the University. Previous to that time the curriculum was of the ordinary composite structure, made up of those subjects which are the common heritage of all colleges, and the new ones that were demanding recognition. As most of the work was required the inevitable result was that very few subjects could obtain time enough to made [sic] useful in training. Early in this period referred to, this unsatisfactory plan was entirely abandoned by a differentiation of previously existing departments and the introduction of new ones. (Davidson, p. 11)

Why the old curriculum had suddenly become "unsatisfactory" is a question I can't take up here. But the *new* looks suddenly familiar to our eyes.

Instead of three courses, there were eight: Ancient Classics, Modern Classics, English Literature, History and Political Science, Philosophy, Mathematics and Physics, Biology and Geology, and Chemistry. From this time on, English, though it still played a varying part in what we would call "general education," was a field of study on its own. Jordan had invented the English major, or gotten Clark to invent it. As Jordan wrote in his autobiography, he relegated the "elementary" subjects that had previously made up the curriculum to the first two years, and "instituted a 'major subject' system, by which each junior or third-year student was required to choose a specialty or 'major' and to work under the immediate advice of his 'major professor.' . . . The natural extension of this emergence of specialized undergraduate study was the introduction of graduate work."[22] It shouldn't occasion much surprise that the five three-term courses for junior and senior majors included such rubrics as "Anglo-Saxon Prose and Poetry," "leading authors from Chaucer to Hooker," "Dryden to Johnson," "Cowper to Macaulay," "Milton," and "Longfellow and Tennyson." In making his University serious, scholarly, and professional, Jordan had created the field of English. There were fluctuations, but his pattern prevailed.

The department, in more nearly our modern sense, was a by-product of the change in curriculum. By 1893 Professor Martin W. Sampson led a staff of six; there were academic ranks; there were three groups of English courses, in the "natural groups" of language, composition, and literature, with most of the work elective. Sampson is clear in his mind about the purpose of this enterprise: "we are concerned with the *study* of literature." Not "the method of the professor who preaches the beauty of the poet's utterance," but the method of the one who "makes his student systematically approach the work as a work of art, find out the laws of its existence as such, the mode of its manifestation, the meaning it has, and the significance of that meaning," in short, approach the work "intellectually."[23] As Donald Gray says, Sampson's essay is striking for its attempt to define a distinctly literary study: "This concern quite naturally follows from, or accompanies, the notion of a relatively independent Department of English which itself determines how it will educate students to know or do something, presumably something different from the knowledge and talents in which other departments educate students" (Gray, p. 7). That is to say, the curriculum has become professionalized. Anyone can *appreciate* literature; and the best appreciator is doubtless the person, Ph.D. or no, with the best taste. But to teach the systematic, intellectual study of literature is a professional calling. Accordingly, teachers began to talk and act like professionals. Barrett Wendell's account of English at Harvard stresses that each department member is "absolutely free" to teach as he likes, and that the department works by the "free and mutually cordial efforts of teachers differing widely" in style and belief (Payne, p. 48).

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[22] *The Days of a Man* (New York, 1922), I, 235; quoted by Davidson, pp. 16-17.

[23] *English in American Universities*, ed. William M. Payne (Boston, 1895), p. 96.

Payne's collection of statements from *The Dial* by twenty chairmen (1895) includes a fair variety, but two recurrent themes suggest the effort, parallel to Sampson's, to cast out what is not properly part of the discipline. Both themes show newly enfranchised English departments trying to reject parts of their earlier history that fit ill with the professional image. (1) The chairmen want to distinguish their work from science ("*parvenu* science, crass, boorish, and overbearing," as one of the new graduates puts it), their competitor on one side. (2) Many of the chairmen would like to shake loose from what Sampson calls "the bug bear known generally in our colleges as Freshman English" (p. 93), and what Anderson of Stanford refers to as "the drudgery of correcting Freshman themes" (p. 52). Does this sound familiar? That the effort failed is indicative of the utility that English instruction had for the rest of the university and for the clients outside: that it has been repeatedly made is indicative of a profession's natural wish to be as dignified as possible, to gain release from the servile duty of tutoring the young in verbal manners. The chairmen argue that their subject is logically separate from other university subjects, and more advanced than school subjects.

At the same time, they hang on to ancient justifications for literary study as *culture,* par excellence. This is the commonest thread of ideology among the 1895 essays. Literature finds its resonance in the better and more refined parts of the self. Through it students are given "the very words to guide their higher thought" (F.A. March, Lafayette College, p. 77). Their *higher* thought, the very soul. It is at that exalted range that literature affords its benefits. Hiram Corson of Cornell, dismissing the purely historical and factual study of literature as unimportant "so far as culture, in its truest sense, is concerned," says that the "true function" of literature is "to quicken the spiritual faculties" (pp. 60-61). Albert S. Cook (Yale) praises literature for uniting *all* the faculties: "To this end no study can be better suited than English, its comprehensiveness, variety, and richness of content rendering it an unsurpassed aliment of the spiritual life" (p. 39).

It is not hard to hear the voice of Matthew Arnold behind these claims (though, oddly enough, Thomas Arnold is quoted more often). And indeed, the authors commonly join the ennobling effect of literature on the self to its supposed effect on the whole society. The one student represented in the collection, Charles W. Hodell, thinks that English literary classics "can be made the instruments of culture for the American youth," as Greek and Latin classics were for English youth (p. 176). Latent here and throughout the *Dial* statements is the idea, traced in detail for England by Raymond Williams in *Culture and Society*, of the social organizm as brutalized by industrialism and commercial values, and of culture as a separate and arduously maintained remedy.

I don't know how much of this message the general public heard or believed. Probably it mingled with another message on another frequency: English is the sum of verbal attainments needed to make good in American society. Professor Sanford (Rhetoric, Minnesota) sounds more realistic to me than most of those quoted above: "Where, as in Minnesota, so large a proportion of the population consists of foreigners who are ambitious and capable, the University must be content to be a part of this drill [in textbook grammar and rhetoric]. A boy may lead his class in mathematics and Latin and chemistry, and still be unable to free his tongue from the Scandinavian accent, or his written work from foreign idioms . . . the fundamental work of the University must be a struggle for correctness . . ." (p. 159). The English department may talk of cultivating the spirit, but it is also eradicating the stigmata of foreign idiom and lower class speech, freeing ambitious boys to rise in society on their merit. To some the manners of the liberally educated are as important as the education. Acquaintance with a common heritage is a second proof of cultivation. Wallace Douglas points out that the classics had earlier served this function, but could not so easily do so for the new men of affairs who would come from the middle class. It was necessary

> . . . that these "upwardly mobile" young men be given the body of cultural references and assumptions that study of the Classics had given those in whose hands control of schooling still rested. Or perhaps in both places "have placed before them" is better than "be given." For no real gift was involved; the crucial fact about the process was that it sorted out those who could and would internalize the values and behavioral norms that schooling was intended to transmit. So it is today: that is why examinations were and remain so important a part of schooling. (Douglas, p. 36)

English literature was at hand, and convenient.

The new universities were making themselves essential to American society, as sources of new knowledge that might have practical application in industry, as transmitters of the skills and attitudes that managers would need, as training schools for the professions. English as a discipline did not put itself forward initially as a critical part of this complex, nor was it quick to adapt its ideology to its functions. But the rest of the university valued English, both for its supposed work of teaching students to write and for the high cultural tradition to which English departments laid claim. Besides, students liked studying literature. So English had a piece of solid ground initially in the fluid academic institutions of the 1880s and 1890s. But to keep that place, and compete as an equal among the various fields, English had to become a profession along with disciplines like chemistry and engineering whose use to industrial society was so much clearer. In consequence English departments have played down the less professional side of their work and build around the more professional, with the results that I have tried to explain in this essay.

Of course the concept of professionalism has no more than a mediate explanatory power. It can't be the final answer to the question, "Why are English departments the way they are?" A deeper answer would have to bring together history, sociology, and economics in a way that is beyond my reach. I will just enter here my opinion that professionalization holds a key place in bourgeois society. It's partly as Harold C. Martin said, writing about English departments from his perspective as college president: "The necessary specialism of our society has both produced and resulted from specialism in higher education. Directly and not-so-directly, the rewards of society, especially at the lower and the median levels, go to the specialist; and our academic structure, bourgeois to the core, shapes itself to these rewards" (*ADE Bulletin*, No. 15, p. 18). Specialism—the dividing up of productive technique into small units, and apportioning these skills to narrowly trained workers—gives occupational groups the opportunity of separating themselves from the laity, and gaining a monopoly over distribution of their skills and services. The tangible rewards of success in this project are plain. Beyond that, I believe that the conditions of work in capitalist society impel us to seek professional status. For to be a professional is to regain control to an extent over the nature, the pace, and the outcome of one's work—to overcome in fair measure the alienation of labor under industrial capitalism. The professional also protects himself, or increasingly herself, from the worst rigors of competition. Tenure is our peculiar academic means to this end, but we also use other, more typical ways of establishing our own scale of merit, defending against the intrusion of would-be judges from outside, and insuring against painful recognition of failure. In their ideologies, professions also offer the comfort of identifying the worker's own welfare with that of the whole society, and at the same time claiming independence *from* the social matrix. The bourgeois myth of freedom finds here an almost faultless embodiment.

So do we carry on our "conspiracies against the laity." Not out of venality, or no more venality than is ordinary in this society; rather, we seek to be professionals as a way of escaping the powerlessness of ordinary work, and the nastier side of economic life in capitalist society. Professionalism is a claim to human dignity. Unfortunately, we succeed in the claim at a cost to others—and also at a cost to perception of the way in which dignity for all people lies.

VI

A postscript is necessary, lest my argument be mistaken and misapplied. A conflict exists between the claims of the professions and the claims of less-privileged workers. But in the midst of cries for "accountability," behavioral objectives, and vocational education; in a time of cutbacks, increased teaching loads, and lagging salaries; in a society where leaders take out their frustrations on intellectuals and where legislators and regents are only too willing to mount their own kind of attack on the teaching profession—I would by no means imply that our profession should now welcome annexation by the larger society. In such a context "society" almost inevitably means some part of the ruling class, some reactionary body or other. Against *those* people, the institutions of our profession and of the university generally—academic freedom, independence, privacy—do have a protective value. Better the MLA than the FBI. Within professional walls, mavericks and communists and critics of society can survive. Partly for this reason the university is one of the institutions that occasionally turns progressive. For people who want a democratic and egalitarian and socialist society, the moral of the foregoing analysis is not to destroy professional ramparts, but to reach out over them—selectively—to poor people, minority races, workers, and in so doing build alliances that may save and humanize the intellectual life in bad times shortly to come.